Preventing Substance Abuse and Promoting Mental Health in Kentucky

A State Profile to Promote Positive Mental and Behavioral Health

State Epidemiological Outcomes Workgroup (SEOW) Report • 2012

Prepared for the Division of Behavioral Health, Department for Behavioral Health, Developmental and Intellectual Disabilities, Kentucky Cabinet for Health and Family Services by REACH of Louisville, Inc.

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Acronymns

ADD—Area Development District
ADHD—Attention Deficit Hyperactivity Disorder
ARF—Area Resource File
BRFSS—Behavioral Risk Factor Surveillance System
CDC WONDER—Centers for Disease Control Wide-ranging Online Data for Epidemiologic Research
CSAP—Center for Substance Abuse Prevention
DAHC—Dartmouth Atlas of Health Care
DBHDID—Department for Behavioral Health, Developmental and Intellectual Disabilities
DCBS—Kentucky Department for Community Based Services
FPL—Federal Poverty Level
KASPER—Kentucky All Schedule Prescription Reporting System
KCR—Kentucky Cancer Registry
KDE—Kentucky Department of Education
KCSS—Kentucky Center for School Safety
KIP—Kentucky Incentives for Prevention
KSP—Kentucky State Police
MDE—Major Depressive Episode
MTF—Monitoring the Future
NSCH—National Survey of Children's Health
NSCSHCN—National Survey of Children with Special Health Care Needs
NSDUH—National Survey of Drug Use and Health
SAMHSA—Substance Abuse and Mental Health Services Administration
SEOW—State Epidemiological Outcomes Workgroup
SMI—Serious Mental Illness
SPF—Strategic Prevention Framework
YRBS—Youth Risk Behavior Survey
WHO-CIDI—World Health Organization Composite International Diagnostic Interview

Contents

The Kentucky SEOW developed this profile to facilitate state- and community-level planning that focuses on the prevention of morbidity and mortality while promoting positive mental, emotional, and behavioral health among youth.

Introduction

Purpose

The 2012 Kentucky State Epidemiological Profile has been revised and updated under the supervision of the State Epidemiological Outcomes Workgroup (SEOW). This initiative was funded by the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Substance Abuse Prevention (CSAP). Kentucky's SEOW is coordinated by REACH of Louisville, Inc. through a subcontract with the Division of Behavioral Health within the Kentucky Department for Behavioral Health, Developmental and Intellectual Disabilities (DBHDID). The SEOW also includes key representatives from state agencies, organizations, and academic institutions.

Kentucky's State Profile extends the original SEOW activities associated with substance abuse assessment and surveillance that utilized CSAP's Strategic Prevention Framework (SPF). This profile expands the focus of monitoring and surveillance to include mental and behavioral health indicators through an update of current datasets. The Kentucky SEOW developed this profile to facilitate state- and community-level planning that focuses on the prevention of morbidity and mortality while promoting positive mental, emotional, and behavioral health among youth. These data will be integrated into the data warehouse located at http://sig.reachoflouisville.com. Through the data warehouse, these data will be accessible to preventionists throughout the Commonwealth to inform their decision-making at state and community levels.

Profile Development

Between January and March 2011, the SEOW received guidance through presentations and input by individuals from a range of disciplines. Through open forums, a lifespan model was developed to guide the initial selection of relevant data sources and indicators. Following the review of a broad range of data, the workgroup collectively prioritized describing Kentucky's unique culture as well as trans-generational effects related to substance abuse and mental health. Eastern Kentucky received special attention as a vulnerable population area due to chronic impoverishment and a history of exceedingly high levels of substance abuse. Other areas to receive special attention included prescription drug abuse and mortality, psychiatric morbidity among children and adults, suicide behavior, mortality and risk factors, and healthcare access and utilization.

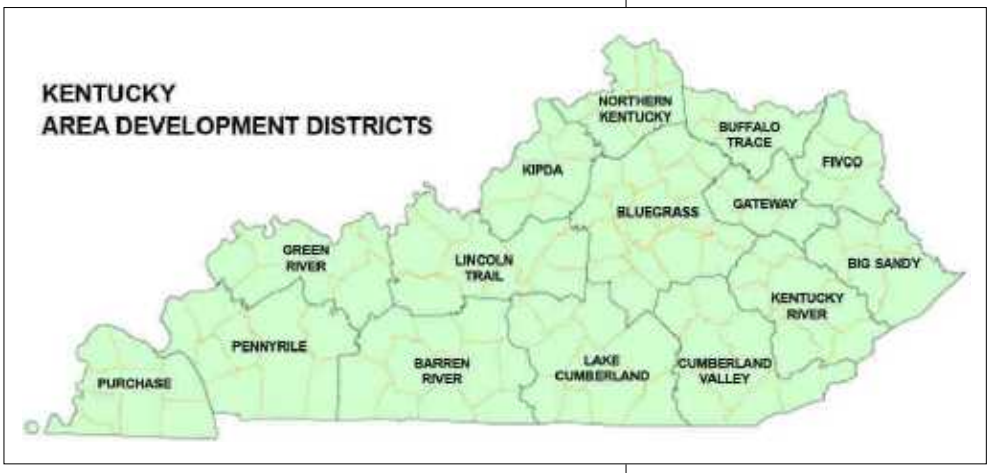
Each section includes concise descriptions of data sources, indicators, and relevant findings. When rates are compared based on year or any subgroup, percentage point differences are used. For example, a rate of 5% in 2009 and 10% in 2010 represents a 100 percent (%) increase and a 5 percentage point increase, with the latter rate comparison being utilized throughout this profile. Indicators are also stratified by age and grade when possible to provide "snapshots" of infancy (ages 0-2), childhood (ages 3-11), adolescence (ages 12-17), young adulthood (ages 18-25), or adulthood

(ages 26+) in relation to substance abuse consumption and outcomes, risk and protective factors, and mental/behavioral health. For school-based substance abuse consumption, grade 10 is used as a referent year. KIP evaluators believe 10th grade responses to be the most accurate indicator of use among high school students. By 12th grade, the effect of drop-out rates artificially depresses these numbers. Other relevant stratification terms include race/ethnicity, sex/gender, and socioeconomic status (e.g., poverty level, education, or income depending on the data source).

Data Sources

A variety of data sources were utilized to describe the Commonwealth of Kentucky. Demographic statistics are from the 2010 US Census. The gender frequencies include all males and females. For race and ethnicity, frequencies include persons who self-identify as non-Hispanic Caucasian, non-Hispanic African-American, non-Hispanic Alaska Native or Native American, non-Hispanic Asian or Pacific Islander, Hispanic, or multiracial. Data regarding substance consumption and intervening factors among 10th graders are from the 2010 Kentucky Incentives for Prevention (KIP) Survey; for combined youth and adults (i.e., age 12 and older), consumption and intervening factor data are from the 2008-2009 National Survey on Drug Use and Health (NSDUH). Scheduled drug prescription rates are the most recent data derived from the Kentucky All Schedule Prescription Electronic Reporting (KASPER) system. Morbidity and mortality data are from the 2003-2009 Behavioral Risk Factor Surveillance System (BRFSS), the 2006-2007 Dartmouth Atlas of Health Care (DAHC), the 1999-2008 Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research (CDC WONDER), the 2003-2007 Kentucky Cancer Registry (KCR), and the 1999-2009 Treatment Episodes Dataset-Admissions (TEDS-A). Drug-related collisions and arrests are from 2009 Kentucky State Police (KSP) data, while disciplinary actions for drug use, possession, and distribution are from the 2010 Kentucky Center for School Safety (KCSS) data system. Birth outcomes and child neglect data are from the 2006 Kentucky Office of Vital Statistics and 2010 Kentucky Department for Community Based Services, respectively. Mental and behavioral health outcomes are from the 2008-2009 NSDUH, the 2003-2009 BRFSS, and the 1999-2007 CDC WONDER. Mental health and primary care provider rates are derived from the 2008-2009 Area Resource File (ARF).

A detailed listing of data sources may be found in the Appendix 3, page 40.



The 2012 Kentucky State Profile continues the original SEOW focus of substance abuse monitoring and surveillance to include mental and behavioral health indicators through a re-evaluation of a variety of data sources.

Executive Summary

The 2012 Kentucky State Epidemiological Profile has been revised and updated under the supervision of the State Epidemiological Outcomes Workgroup (SEOW). This initiative was funded by the Substance Abuse and Mental Health Services Administration's (SAMHSA) Center for Substance Abuse Prevention (CSAP). Kentucky's SEOW is coordinated by REACH of Louisville, Inc. through a subcontract with the Division of Behavioral Health within the Kentucky Department for Behavioral Health, Developmental and Intellectual Disabilities (DBHDID). The SEOW also includes key representatives from state agencies, organizations, and academic institutions.

The 2012 Profile is published in a more condensed and polished format to make it more accessible to policy makers and coalition members. The Profile updates and enhances earlier work on substance abuse and mental health indicators and continues to focus on the three priority areas originally identified in 2011: cigarette smoking, binge drinking, and prescription drug abuse.

New additions to the 2012 profile include historical data from the Kentucky All Schedule Prescription Electronic Reporting (KASPER) system. Additionally, three state-level mental and behavioral health indicators were incorporated into the 2012 Profile, using data from the 2008-2009 National Survey on Drug Use and Health (NSDUH). These new indicators included the following: past-year serious mental illness, any past-year major depressive episode, and past-year suicidal thoughts. The remaining indicators have been updated to the most recent year when applicable. The major findings are outlined below:

Cigarette Smoking

- Approximately 26.1% of Kentucky high school students are current smokers (i.e., past-month cigarette users) compared to 18.2% nationally. (YRBS, 2009)
- Elevated rates of adolescent smoking were found in the Kentucky River (27.2%), Barren River (26.8%), and Lake Cumberland (26.1%) area development districts (ADD). *(KIP 2010)*
- Approximately 44.3% of 18-25 year olds and 32.4% of 26+ year olds were current smokers in Kentucky compared to national rates of 35.8% and 23.4%, respectively. *(NSDUH 2008-2009)*
- Significantly more Kentucky residents (40% vs. 26%) report having a family member who smokes cigarettes, pipes, or cigars. *(NSCH, 2007)*
- Among pregnant women, the smoking prevalence in Kentucky more than doubles the national rate (26% vs. 10.7%), with the highest rates found in Eastern Kentucky. *(KIDS COUNT, 2006)*

Binge Alcohol Use

- Among youth, 21% of Kentucky 10th graders report being drunk in the past month compared to 14.7% nationally. *(KIP & MTF, 2010)*
- Although past-month alcohol use among 10th graders in Kentucky was slightly lower than the national average of 28.9% in 2010, KIPDA (31.8%), Lincoln Trail (29.8%), FIVCO (28.8%), Northern Kentucky (27.3%), Barren River (26.5%), and Bluegrass (26.4%) emerged as the ADDs with rates higher than the state average of 26.1%. *(KIP, 2010)*
- Kentucky River was the only ADD in Kentucky with increasing rates from 2008 to 2010 for both binge drinking (15.2% to 17.8%) and being drunk (19.4% to

21.4%). *(KIP, 2008-2010)*
- Among 18+ year olds, Kentucky had the highest frequency of past-month binge drinking in the nation, with an average of 5.9 episodes compared to 4.4 episodes for the US. *(BRFSS, 2010)*

Prescription Drug Abuse

- Past-year nonmedical use of opioids was highest among 18-25 year olds, with approximately 15.4% reporting use compared to 11.9% nationally. *(NSDUH, 2008-2009)*
- Prescription rates for hydrocodone and oxycodone increased 27% and 49%, respectively, from 2003 to 2010. *(KASPER 2003-2010)*
- From 1999 to 2009, the prevalence of treatment admissions with opioids listed as the primary substance dramatically rose from 1.8% to 23.5%, compared to 1.3% to 7.1% nationally. *(TEDS-A 1999-2009)*
- In 2008, drug overdose mortality regardless of intent in Kentucky ranked sixth highest in the nation at 17.9 per 100,000 This compares to a rate of 11.9 per 100,000 nationally. *(CDC WONDER, 2008)*
- Compared to other forms of mortality in Kentucky, drug overdose mortality surpassed suicide mortality in 2005 and approached motor vehicle mortality in 2008. *(CDC WONDER, 1999-2008)*

Mental and Behavioral Health

- In 2007, Kentucky children 2-17 years old had higher lifetime rates than the US for attention deficit disorders (11% vs. 8.4 %), depression (4.3% vs. 3.7%), anxiety (5.6% vs. 4.5%), and conduct disorders (4.9% vs. 4.4%). *(NSCH, 2007)*
- The past-year prevalence of serious mental illness was slightly higher in Kentucky than the US for 18+ year olds (5.4% vs. 4.6%), 18-25 year olds (7.5% vs. 7.4%), and 26+ year olds (5.1% vs. 4.1%).
- From 2003-2009, the average number of poor mental health days in Kentucky was 4.3 days compared to 3.5 days nationally, with Eastern Kentucky counties tending to average 5.3-9.3 days.
- In 2009, rates of past-year suicide behaviors among Kentucky high school students were higher than national rates: 14.6% vs. 14.3% for suicide consideration, 12.5% vs. 11.4% for making a suicide plan, and 8.8% vs. 7.9% for making one or more suicide attempts.

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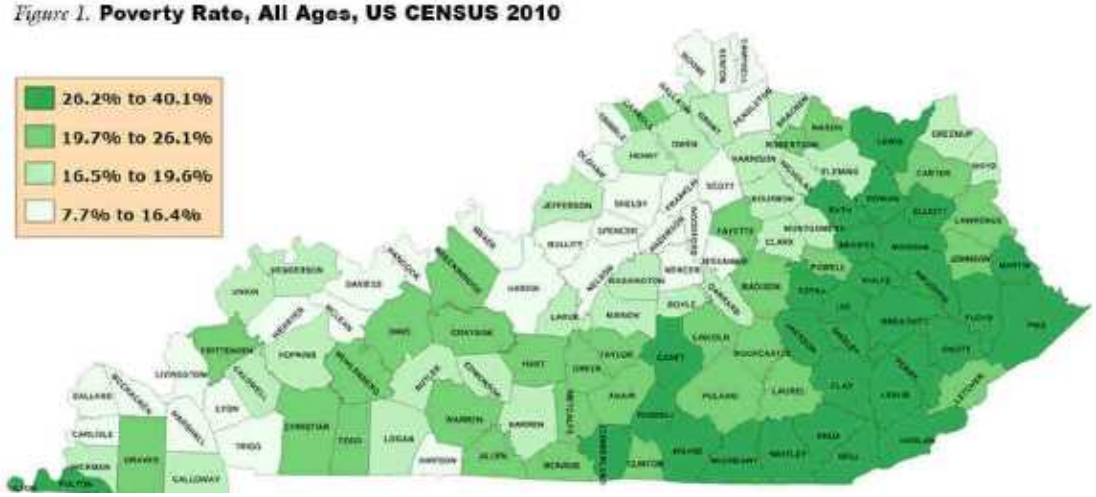
Demographics and Context

The United States Census Bureau in 2010 estimated that 18.9% (up from 17.0% in 2009) of Kentuckians live below the poverty level compared to 15.3% of the US.

The Commonwealth of Kentucky is comprised of approximately 4.3 million people living in 120 counties. As of 2010, 87.8% of Kentuckians were Caucasian, 7.8% were African-American, and 1.1% were Asian or Pacific Islanders. Hispanic or Latino individuals of any race comprised 3.1% of Kentucky's population in 2010, up from 2.7% in 2009. Overall, Kentucky has a similar population of women (51%) and men (49%). Approximately 49.3% of total Kentucky households were made up of the traditional husband-wife couple in 2010, down from 53.9% in 2000. These decreasing trends may be due to an increase in same-sex couples that grew from an estimated 2,900 in 2000 to an estimated 7,195 in 2010. Overall, Kentucky had a rate of 4.2 same-sex couples per 1,000 households in 2010, lower than the national rate of 5.5 per 1,000.

Kentucky remains one of the poorest states in the nation. The United States (US) Census Bureau in 2010 estimated that 18.9% (up from 17.0% in 2009) of Kentuckians live below the poverty level compared to 15.3% of the US *(Figure 1)*. It was also estimated in 2010 that 26.1% of children under the age of 18 live below the poverty level (up from 25.3% in 2009) compared to the national average of 21.6%.

Figure 1. **Poverty Rate, All Ages, US CENSUS 2010**



In 2010, Kentucky had an estimated median household income of $40,089, down from $42,664 in 2009 *(Figure 2)*. The unemployment rate was 10.5% in 2010, down from 10.7% in 2009. Between 2009 and 2010, Kentucky lost a total of 5,465 jobs in the private sector, while 3,780 jobs were added in the government sector. Between 2003 and 2010, private sector employment decreased by 1.43% in Kentucky, with the largest decreases in the Buffalo Trace/Gateway (-6.9%), FIVCO (-3.1%), Pennyrile (-2.1%), and Purchase (-2.1%) Area Development Districts (ADDs) *(Figure 3)*.

Along with the social determinants of health that often are driven by poverty, Kentuckians face many health-related problems associated with lifestyle choices, community culture, and the major role of certain industries in Kentucky's economy. Two industries in particular, alcohol and tobacco, have heavily influenced agriculture, economics, politics, and public health in Kentucky for many years. Kentucky has

Figure 2. **Median Household Income, US CENSUS 2010**

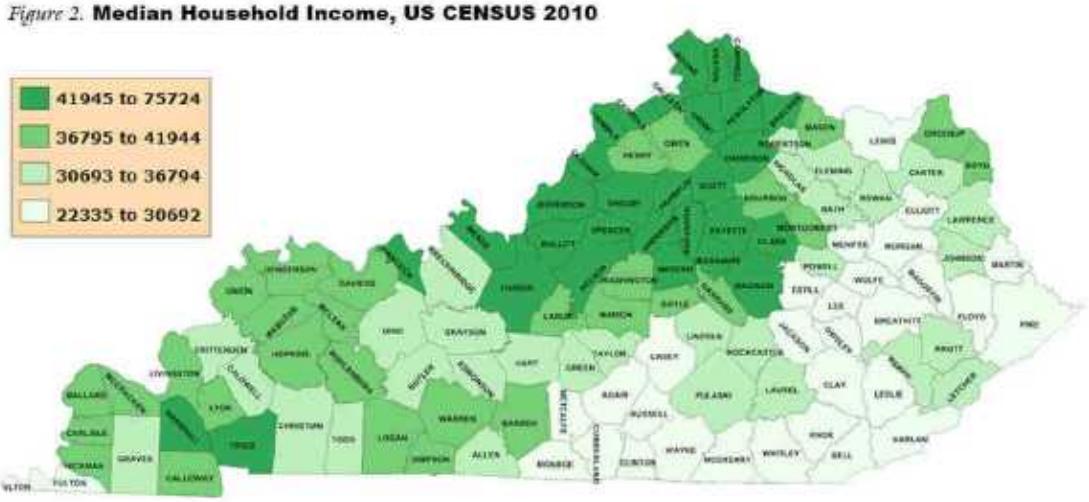
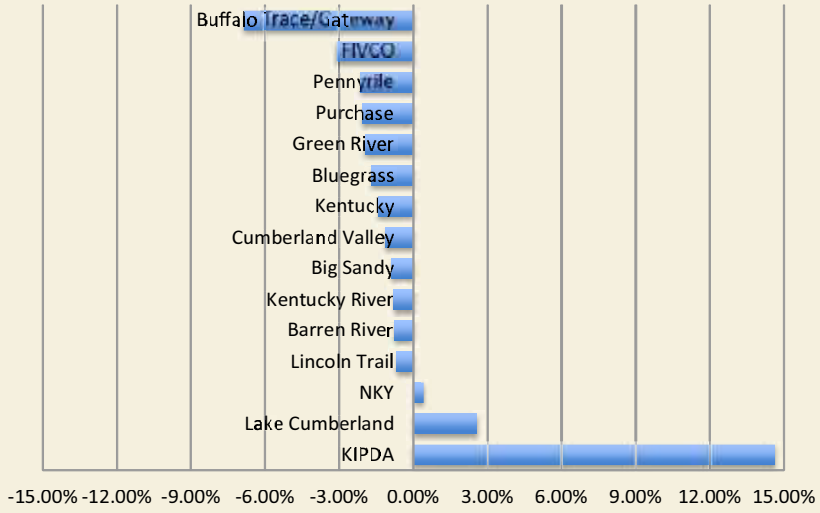


Figure 3. **Change in Private Sector Employment by Area Development Districts, Kentucky 2003-2010**



the largest number of distilleries in the nation, accounting for over $1 billion in annual revenues; and industry-wide revenues related to tobacco production and consumption account for approximately $500 million.

Although Kentucky's smoking rates continue to exceed national levels, the implementation of smoke-free ordinances has begun to de-normalize smoking in public places. As of January 2012, 19 Kentucky municipalities have successfully implemented 100% smoke-free ordinances that cover non-hospitality workplaces, restaurants, and freestanding bars. An additional eight municipalities have ordinances that provide partial coverage. As of July 2010, however, the state excise tax on tobacco at $0.60 continued to be one of the lowest rates in the nation and less than half of the national average of $1.34.

Another substance related contextual issue relates to the abuse of prescription drugs and the toll this abuse is taking on families and communities. The reasons for the

emergence of this problem are many, but include a population of laborers who seek relief from pain, a culture in which the sharing of medicines is acceptable, a network of insurers that cover these drugs, a highway system that promotes the transport of medicines across state lines, and persistent poverty that leads to the generation of income through illegal means. In 2008-2009, Kentucky had higher past-year rates of illicit opioid use than the US for all age groups.

Particularly evident in Kentucky are high rates of unhealthy dietary behaviors that cluster with substance abuse and its consequences. In 2009, 18% of Kentucky high school students were obese compared to 12% nationally. Among Kentucky adults in 2010, approximately 32% were obese compared to 28% nationally. Only 44% of people in Kentucky had access to healthy foods through grocery stores, produce stands, and farmers' markets in 2008 compared to the national benchmark of 92%. People in Kentucky also have poor access to sports and fitness facilities that promote physical activity and lead to improved health outcomes. In 2008, the recreational facility rate in Kentucky was only 8 facilities per 100,000 people compared to the national benchmark of 17 facilities per 100,000.

In summary, Kentucky possesses numerous socioeconomic and contextual factors that impact multiple facets of health as depicted throughout this profile. Specifically, substance abuse consumption patterns and consequences in Kentucky are described in relation to risk and protective factors as well as physical and mental health. Data are illustrated to show state, regional, and national comparisons and when applicable, results may be further stratified on age, race/ethnicity, and socioeconomic status.

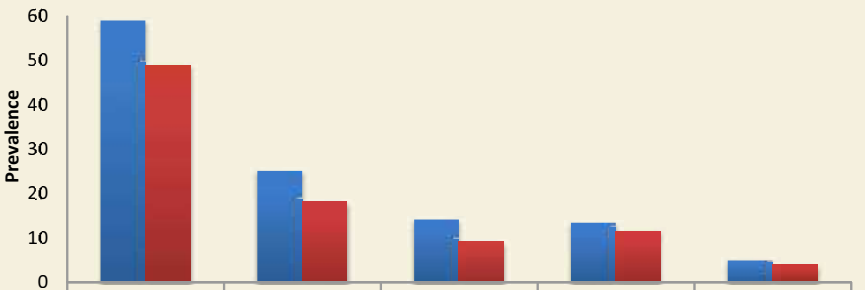
Substance Abuse and Consumption

YRBS (Youth Risk Behavior Survey) Findings

For lifetime and current cigarette use, Kentucky high school students (i.e., grades 9-12) rank the highest in the nation out of 42 total states that participate in the YRBS.

According to 2009 YRBS data *(Figure 4)*, Kentucky high school students continue to exceed the national median rates in lifetime and current cigarette use, current smokeless tobacco use, lifetime inhalant use, and lifetime methamphethamine use. For lifetime and current cigarette use, Kentucky high school students (i.e., grades 9-12) rank the highest in the nation out of 42 total states that participate in the YRBS.

Figure 4. **Substance Use Among High School Students, YRBS 2009**



	Cigarettes (Life)	Cigarettes (Current)	Smokeless (Current)	Inhalants (Life)	Meth (Life)
KY	59	25.1	14.2	13.4	4.9
US	48.8	18.2	9.1	11.6	3.9

KIP (Kentucky Incentives for Prevention) and MTF (Monitoring the Future) Findings

Alcohol. Alcohol is the most widely abused substance among school-aged individuals in the United States and Kentucky. For Kentucky 10th graders, the 30-day drinking prevalence was 26.1% in 2010 *(Figure 5)*, representing a 3.3 percentage point decrease from 29.4% in 2008. National trends for 10th graders remained stable, with less than a 1% point increase from 28.8% in 2008 to 28.9% in 2010. The percentage of 10th graders in Kentucky reporting having been drunk in the past 30 days decreased from 23.7% in 2008 to 21% in 2010. However, these rates are still higher than national estimates among 10th graders of 14.4% in 2008 and 14.7% in 2010. The past 30-day prevalence of being drunk among 10th graders in 2010 was highest in Lincoln Trail (23.3%), KIPDA (23.7%), and FIVCO (22.5%).

Regionally, three Area Development Districts: KIPDA, Lincoln Trail, and FIVCO had the highest rates of past 30-day alcohol usage among 10th graders in 2010 at 31.8%, 29.8%, and 28.8%, respectively *(Figure 6)*.

Figure 5. **30-Day Alcohol Use Among 10th Graders, KIP & MTF 2010**

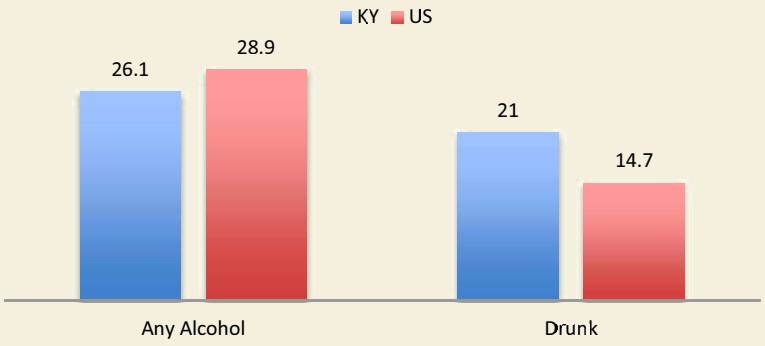
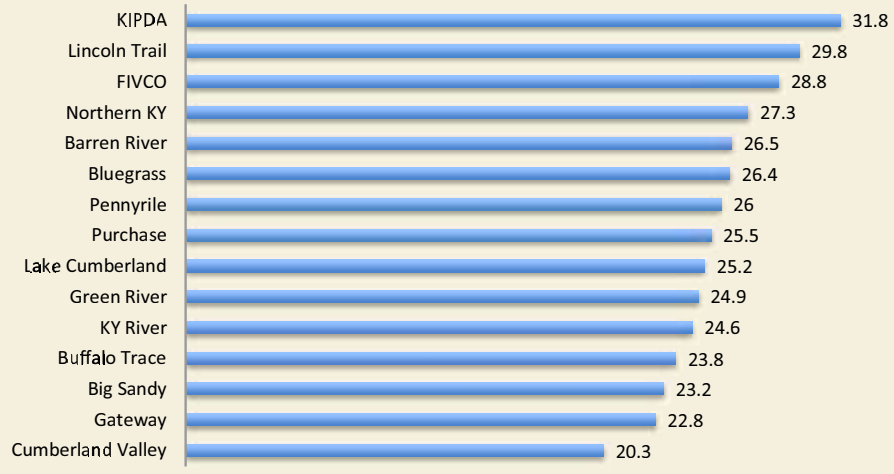
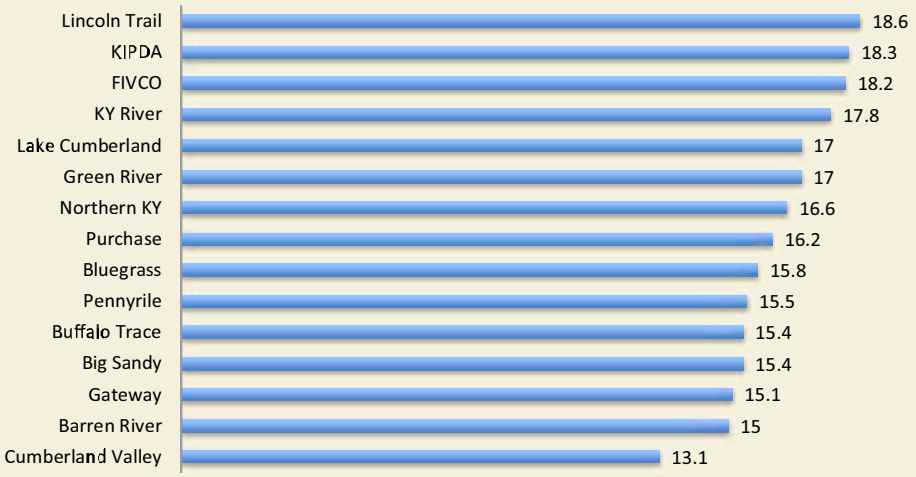


Figure 6. **30-Day Alcohol Use Among 10th Graders, KIP 2010**



Binge drinking refers to males having five or more drinks in a row during a drinking episode. Among females the criterion is four or more drinks in a row. In 2010, 16.3% of Kentucky 10th graders reported binge drinking, representing a 2% point reduction from 18.3% in 2008. Four regions reported the highest rates of 10th grade binge drinking: Lincoln Trail (18.6%), KIPDA (18.3%), FIVCO (18.2%), and Kentucky River (17.8%) *(Figure 7)*.

Figure 7. **30-Day Binge Alcohol Use Among 10th Graders, KIP 2010**



Tobacco Use. While past 30-day cigarette use decreased among 10th graders from 24.4% in 2008 to 21.7% in 2010, the 2010 Kentucky rate is still considerably higher than the US rate of 13.6% *(Figure 8)*. Regionally *(Figure 9)*, the highest rates of 10th grade past 30-day cigarette use in Kentucky were in Kentucky River (27.2%), Barren River (26.8%), Lake Cumberland (26.1%), and Pennyrile (24%).

Past 30-day smokeless tobacco use among 10th graders remained relatively stable in 2010 at 15.9% compared to 15.4% in 2008 *(Figure 8)*. Like cigarette use, Kentucky continues to have vastly higher rates of smokeless tobacco use than the US rate of 7.5% in 2010. In 2010, the highest regional prevalence rates for smokeless tobacco use in Kentucky were in Cumberland Valley (23.1%), Kentucky River (21.6%), Barren River (21.6%), Buffalo Trace (21%), and Big Sandy (20.5%) *(Figure 10)*.

Figure 8. **30-Day Tobacco Use Among 10th Graders, KIP & MTF 2010**

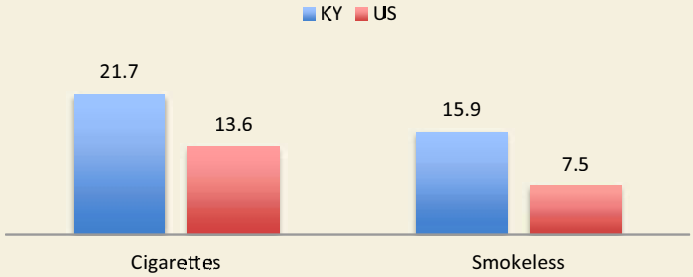


Figure 9. **30-Day Cigarette Use Among 10th Graders, KIP 2010**

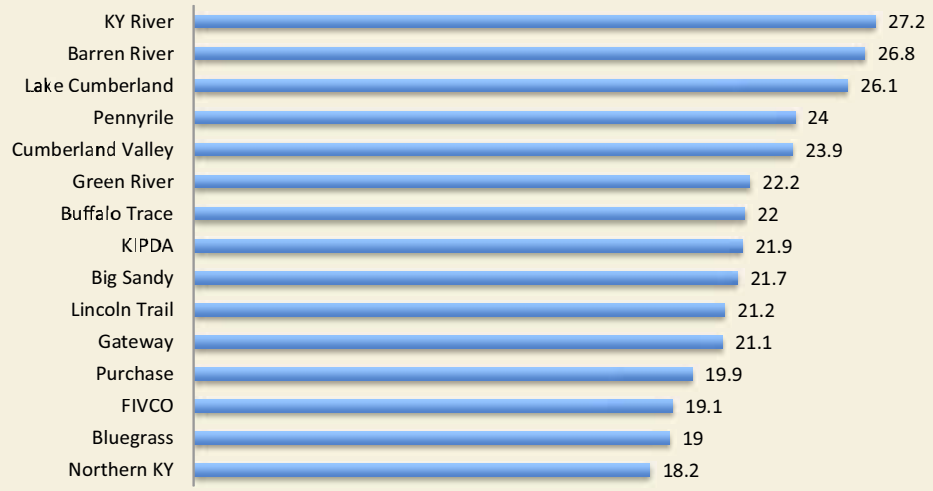
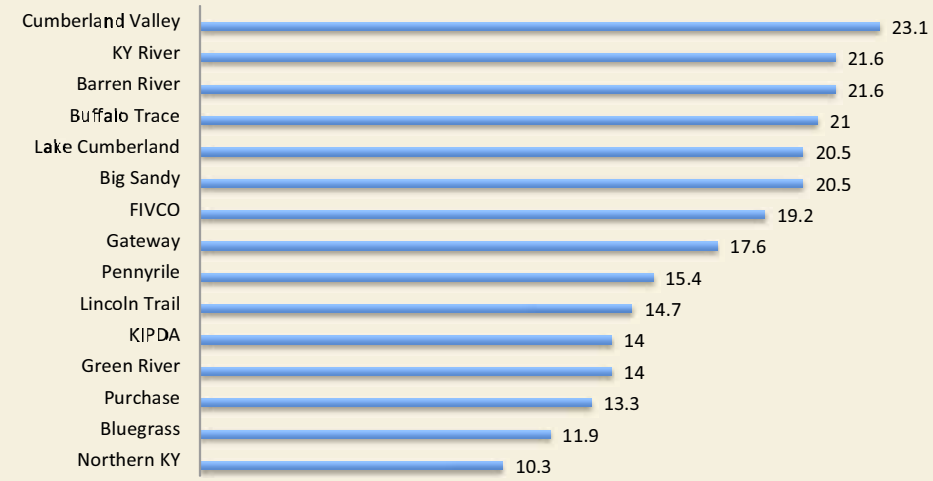


Figure 10. **30-Day Smokeless Tobacco Use Among 10th Graders, KIP 2010**



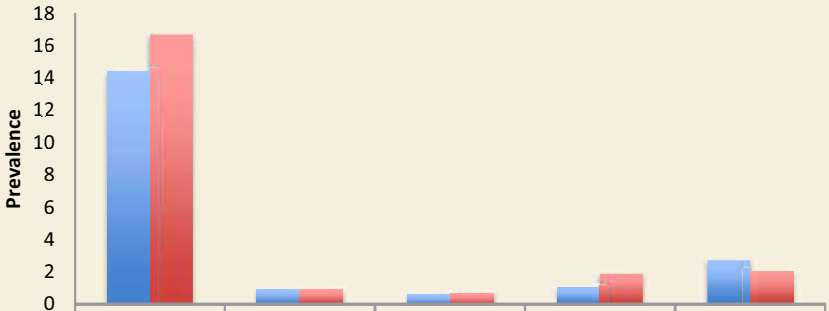
Illicit Drug Use. Marijuana continues to be the most widely used illicit drug among 10th graders in Kentucky *(Figure 11)*. In 2010, the rate of past 30-day use increased among 10th graders in Kentucky from 12.7% in 2008 to 14.4%, similar to national trends that increased from 13.8% in 2008 to 16.7% in 2010. Together, these increased rates at the national and state-level mark the end of recent declines in marijuana use since 2004. The highest 2010 regional rates of past 30-day marijuana use were seen in KIPDA (18.5%), Northern Kentucky (17.5%), and Bluegrass (16.4%).

In Kentucky, the 2010 rate of past 30-day cocaine and crack use was 0.9%, down from 1% in 2008. Nationally, the 30-day cocaine use rate reduced from 1.2% in 2010 to 0.9% in 2010 while 30-day crack use remained unchanged at 0.5% in 2008 and 2010. Regionally, the highest 2010 rates in Kentucky were in KIPDA (1.5%), Green River (1.3%), and Kentucky River (1.2%).

The rate of past 30-day methamphetamine use among Kentucky 10th graders slightly increased from 0.5% in 2008 to 0.6% in 2010, while national rates remained unchanged at 0.7% in 2008 and 0.7% in 2010. Throughout Kentucky, the highest 2010 rates of past 30-day methamphetamine use among 10th graders were in Lincoln Trail (1.1%), Green River (0.9%), Northern Kentucky (0.8%), and Barren River (0.8%).

The 2010 rate of past 30-day use of ecstasy among 10th graders was 1.0%, unchanged from 2008. Nationally, the rate of 10th graders using ecstasy was 1.9% in 2010, up from 1.1% in 2008. The rate of past 30-day usage of inhalants for Kentucky 10th graders was 2.7% in 2010, down slightly from 3.2% in 2008. These rates are still higher than national rates that remained relatively unchanged at 2.1% in 2008 and 2.0% in 2010 among 10th graders.

Figure 11. **30-Day Illicit Drug Use Among 10th Graders, KIP & MTF 2010**



	Marijuana	Cocaine/Crack	Meth	Ecstasy	Inhalants
KY	14.4	0.9	0.6	1	2.7
US	16.7	0.9	0.7	1.9	2

Prescription Drugs. In 2010, the rate of past 30-day amphetamine (speed) use for Kentucky 10th graders was 1.3%, down from 1.9% in 2008. Past 30-day amphetamine use among 10th graders at the national level, however, rose from 2.8% in 2008 to 3.3% in 2010. The past 30-day rate of oxycodone use was 1.6% in 2010, down from 2.2% in 2008. The 2010 rate of past 30-day tranquilizer use among Kentucky 10th graders was 2.4%, down from 3.1% in 2008. Nationally, tranquilizer use among 10th graders rose from 1.9% in 2008 to 2.2% in 2010. This is one place where the rates in Kentucky are lower than the national average and going in a different direction.

Regionally, past 30-day oxycodone use *(Figure 12)* was highest in Barren River (2.8%), Buffalo Trace (2.5%), FIVCO (2.2%), and Northern Kentucky (2.1%). For past 30-day tranquilizer use, regional rates *(Figure 13)* were highest in Purchase (3.9%), Barren River (3.8%), Lincoln Trail (3.3%), and Green River (3.2%). Overall, rates oxycodone and tranquilizer use have slightly declined since 2008.

Figure 12. **30-Day Oxycodone Use Among 10th Graders, KIP 2010**

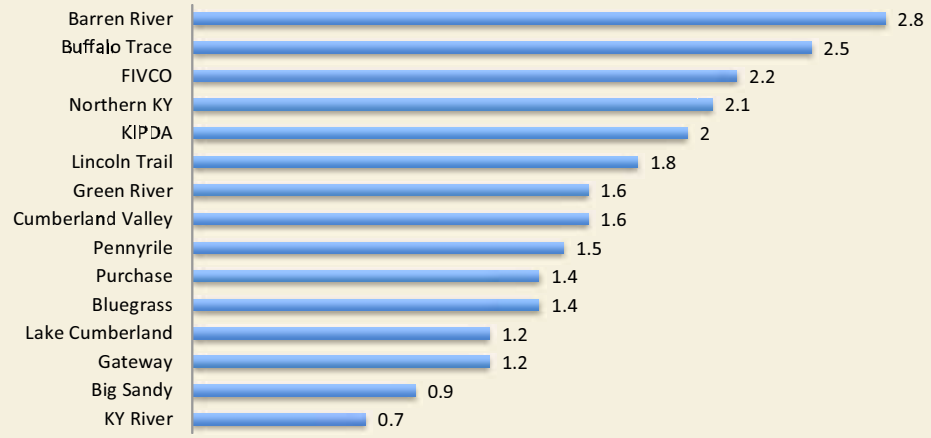
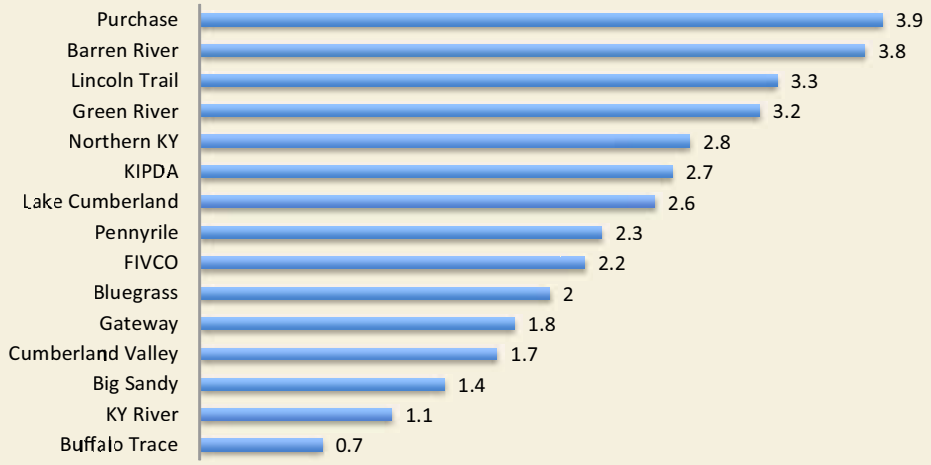


Figure 13. **30-Day Tranquilizer Use Among 10th Graders, KIP 2010**

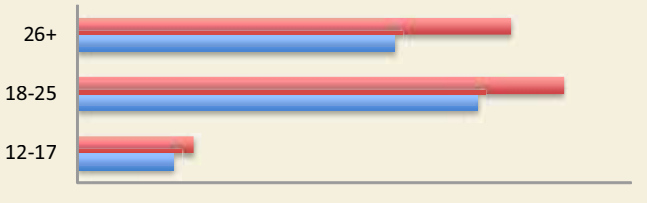


NSDUH (National Survey of Drug Use and Health) Findings

Alcohol. Past-month alcohol use among individuals age 12-17 in Kentucky was 12.2% in 2008-2009 *(Figure 14)*. The Kentucky rate was slightly lower than the national rate of 14.7% in 2008-2009. Past-month alcohol use was the highest among 18-25 year olds in 2008-2009, with 50.6% reporting use in Kentucky compared to 61.5% in the US. Among 26+ year olds, past-month alcohol use was 40.1% in Kentucky while the national rate was 54.8% in 2008-2009.

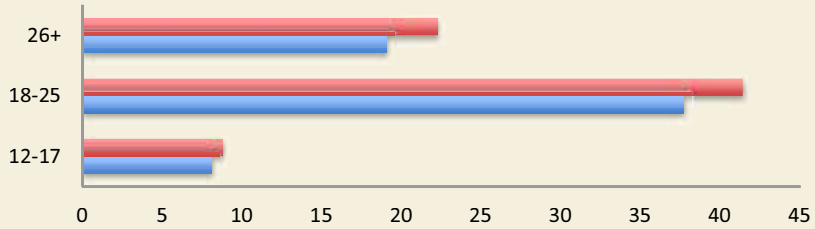
Past-month binge alcohol use among 12-17 year olds in Kentucky was similar to the US: 8.1% vs. 8.8% *(Figure 15)*. Again, 18-25 year olds had the highest prevalence of past-month binge alcohol use in 2008-2009. In Kentucky, the rate was 37.7%, slightly lower than the national rate of 41.4%. For 26+ year olds, the 2008-2009 Kentucky rate was 19.1% compared to 22.3% nationally.

Figure 14. **30-Day Alcohol Use, NSDUH 2008-2009**



	12-17	18-25	26+
US	14.7	61.5	54.8
KY	12.2	50.6	40.1

Figure 15. **30-Day Binge Alcohol Use, NSDUH 2008-2009**

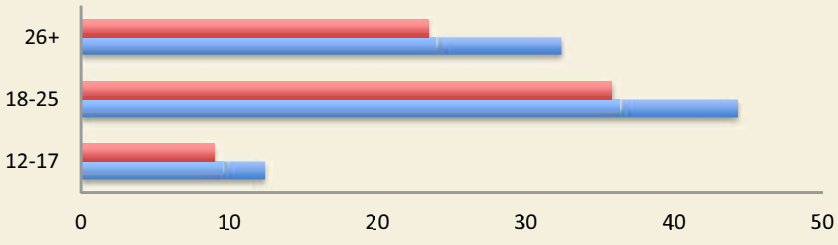


	12-17	18-25	26+
US	8.8	41.4	22.3
KY	8.1	37.7	19.1

Tobacco Use. Past-month cigarette use was higher among all age groups in Kentucky compared to national rates *(Figure 16)*. For 12-17 years old, the Kentucky rate of 12.4% exceeded the national rate of 9%. Like alcohol, 18-25 year olds had the highest usage rate for cigarettes: 44.3% in Kentucky compared to 35.8% for the US. Among 26+ year olds, Kentucky's rate of 32.4% was nearly 9% points higher than the national rate of 23.4%.

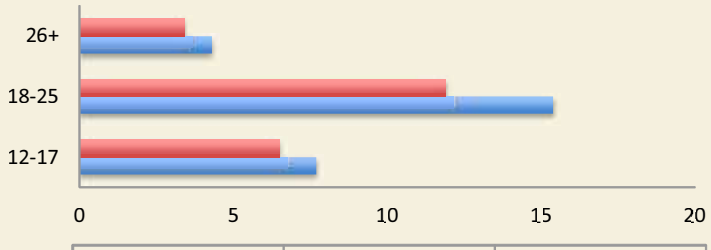
Nonmedical Use of Pain Relievers. While the KIP and MTF surveys track past 30-day usage of OxyContin, the NSDUH tracks past-year use of opioid analgesics (i.e., pain relievers). For all age groups, rates were consistently higher for Kentucky compared to the US *(Figure 17)*. For 12-17 year olds, the 2008-2009 rate for Kentucky was 7.7%, slightly down from 7.8% in 2007-2008 and 8.3% in 2006-2007. Among 18-25 years old, Kentucky rates decreased from 16.3% in 2006-2007 and 16% in 2007-2008 to 15.4% in 2008-2009, but were higher than national rates of 12.3%, 12.1%, and 11.9%, respectively. For 26+ year olds, Kentucky rates increased from 4.4% in 2006-2007 to 5% in 2007-2008, while national rates slightly dropped from 3.6% to 3.4%.

Figure 16. **30-Day Cigarette Use, NSDUH 2008-2009**



	12-17	18-25	26+
US	9	35.8	23.4
KY	12.4	44.3	32.4

Figure 17. **Past-Year Nonmedical Use of Pain Relievers, NSDUH 2008-2009**

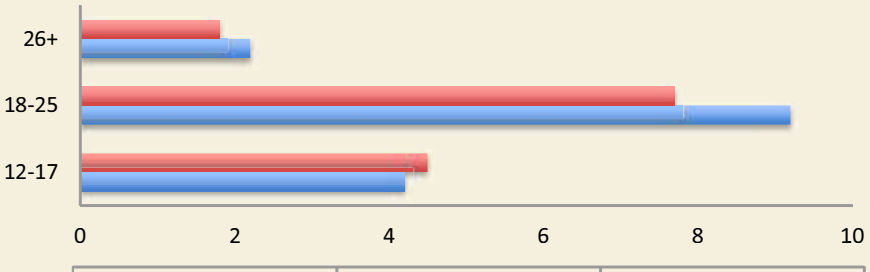


	12-17	18-25	26+
US	6.5	11.9	3.4
KY	7.7	15.4	4.3

Illicit Drug Dependence or Abuse. Kentucky rates of past-year illicit drug dependence or abuse were higher than national rates for all age groups except 12-17 year olds *(Figure 18)*. Among 12-17 year olds, the Kentucky rates slightly dropped from 5% in 2006-2007 to 4.6% in 2007-2008 to 4.2% in 2008-2009, while national rates remained unchanged at 4.5%. The rates plateaued in Kentucky for 18-25 year olds, rising from 9.2% in 2006-2007 to 9.8% in 2007-2008 and back down to 9.2% in 2008-2009, while national rates fell from 7.9% in 2007-2008 to 7.7% in 2009-2009. For 26+ year olds, the rates also plateaued, rising from 1.8% in 2006-2007 to 2.3% in 2007-2008 then decreasing to 2.2% in 2008-2009.

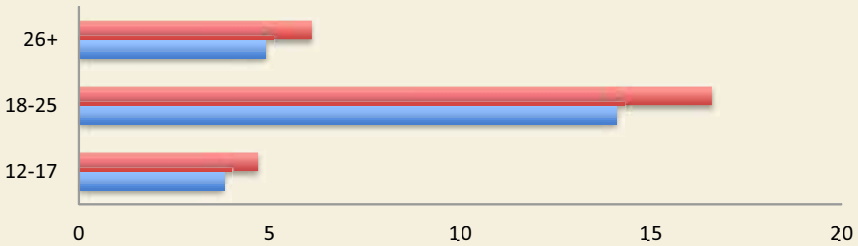
Alcohol Dependence or Abuse.
For past-year alcohol dependence or abuse, Kentucky rates were lower than national rates for all age groups in 2008-2009 *(Figure 19)*. For 12-17 year olds in Kentucky, the rate was 3.8% in 2008-2009, down from 4.8% in 2006-2007 and 4% 2007-2008. Among 18-25 year olds, Kentucky rates fell from 14.9% in 2006-2007 to 13.2% in 2007-2008 then rose to 14.1% in 2008-2009, while national rates remained relatively stable at 17.2%, 17%, and 16.6%, respectively. Kentucky rates fell from 5% in 2006-2007 to 4.7% in 2007-2008 then slightly increased to 4.9% in 2008-2009 for 26+ year olds, while national rates were similar at 6.2%, 6.1%, and 6.1%, respectively.

Figure 18. **Past-Year Illicit Drug Dependence or Abuse, NSDUH 2008-2009**



	12-17	18-25	26+
US	4.5	7.7	1.8
KY	4.2	9.2	2.2

Figure 19. **Past-Year Alcohol Dependence or Abuse, NSDUH 2008-2009**



	12-17	18-25	26+
US	4.7	16.6	6.1
KY	3.8	14.1	4.9

KASPER (Kentucky All Schedule Prescription Electronic Reporting) System Findings

KASPER tracks controlled substance prescriptions dispensed within Kentucky. These data have been tracked since 2003 and quarterly since 2008, and include (among others) prescriptions for hydrocodone, oxycodone, diazepam, and alprazolam. Between 2003 and 2010 *(Figure 20)*, hydrocodone prescription rates increased from 579 per 1,000 to 736 per 1,000 and oxycodone rates increased from 135 per 1,000 to 200 per 1,000. While alprazolam prescription rates modestly increased from 196 per 1,000 in 2003 to 217 per 1,000 in 2010, diazepam rates slightly decreased from 102 per 1,000 to 95 per 1,000.

The most recent regional data are for the 3nd Quarter of 2011 *(Figures 21-24)*. The highest oxycodone (i.e., OxyContin) prescriptions rates were in Clay County (139.1 per 1,000), Perry County (130.1 per 1,000), and Estill County (128.8 per 1,000). High rates were also seen throughout counties in Northern and Eastern

Kentucky. High rates of hydrocodone (i.e., Vicodin, Lortab) prescriptions were also concentrated throughout Eastern and Northern Kentucky, with the highest rates in Owsley County (559 per 1,000), Floyd (484.6 per 1,000), and Johnson County (429.7 per 1,000). Two tranquilizers, alprazolam (i.e., Xanax) and diazepam (i.e., Valium) were prescribed at the highest rates throughout Eastern Kentucky: Martin County (161.93 per 1,000), Clay County (157.2 per 1,000), and Johnson County (144.3 per 1,000) had the highest rates of alprazolam prescriptions; and Johnson County (123.8 per 1,000), Owsley County (108.7 per 1,000), and Floyd County (101.6 per 1,000) had the highest diazepam prescription rates.

Figure 20. **Prescription Rates in Kentucky, KASPER 2003-2010**

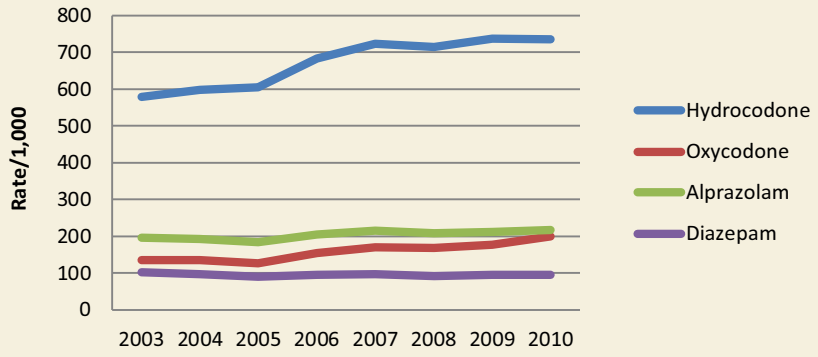


Figure 21. **Oxycodone (OxyContin) Prescriptions Per 1,000 Residents, Quarter 3, KASPER 2011**

Figure 22. **Hydocodone (Vicodin) Prescriptions Per 1,000 Residents, Quarter 3, KASPER 2011**

Figure 23. **Diazepam (Valium) Prescriptions Per 1,000 Residents, Quarter 3, KASPER 2011**

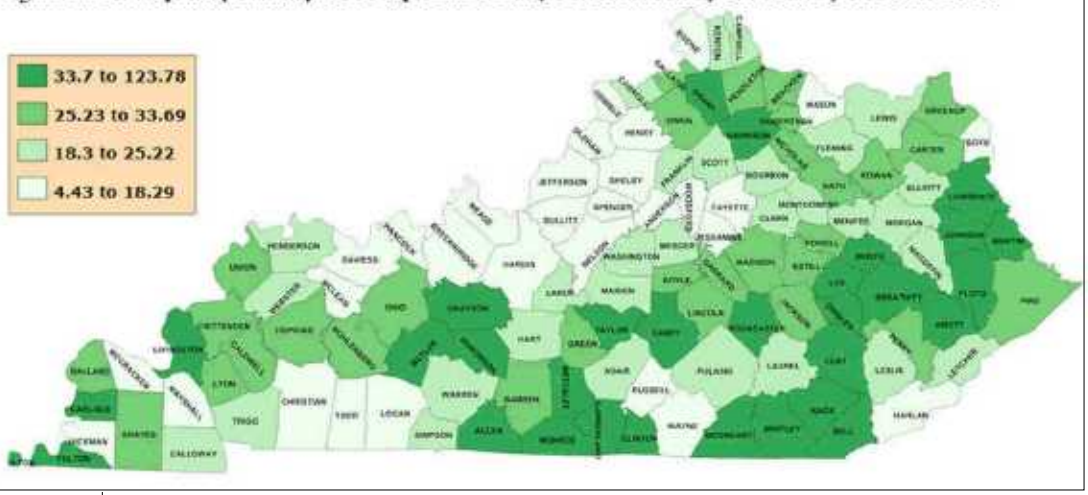


Figure 24. **Alprazolam (Xanax) Prescriptions Per 1,000 Residents, Quarter 3, KASPER 2011**

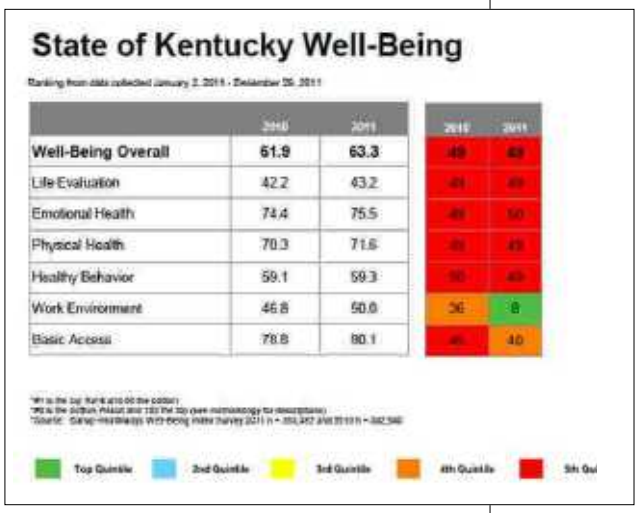
Substance Abuse Consequences

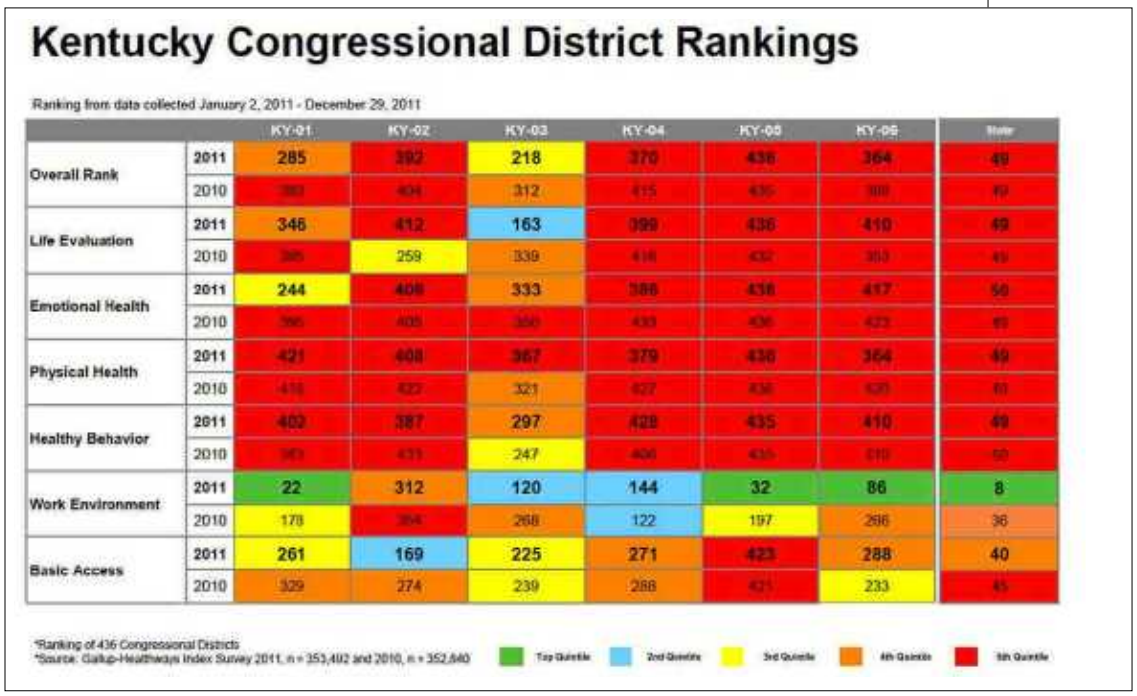
Overall Health

According to the 2011 WBI, Kentucky continues to rank among the lowest states in several categories of health and well-being.

The Gallup-Healthways Well-Being Index Survey (WBI) surveys roughly 1,000 Americans a day, 350 days a year about health and well-being. Based on their responses, individuals and communities receive an overall well-being composite score that is an average of six domains *(Appendix 1)*: Life Evaluation, Emotional Health, Physical Health, Healthy Behavior, Work Environment, and Basic Access. Among states, overall Well-Being ranked from a high of 70.2 in Hawaii to a low of 62.3 in West Virginia. The 2011 national average for Well-Being was 66.2, Life Evaluation 48.8, Emotional Health 79, Physical Health 76.7, Healthy Behavior 63.4, Work Environment 47.2, and Basic Access 81.9.

Each state is positioned 1-50 based on composite scores as compared to all states and each congressional district is positioned from 1-436 based on composite scores of all congressional districts throughout the nation. In 2011, Kentucky ranked among the lowest states in several categories of health and well-being. Kentucky ranks as the lowest state for Emotional Health, a domain that includes daily experiences and quality of life along nine dimensions. Kentucky's rank within the Basic Access and Work Environment domains improved from 45 in 2010 to 40 in 2011 and from 36 to 8, respectively. District 5, comprising 26 Eastern Kentucky counties *(Appendix 2)* again emerged as the unhealthiest region across all domains except Work Environment.





Morbidity and Mortality

Kentucky has the highest adult smoking prevalence in the nation at 25.7% according to the 2010 BRFSS. Cigarette smoking is a major risk factor for several chronic diseases including heart disease, stroke, diabetes and cancer. High rates of cigarette smoking, physical inactivity, poor diet, and obesity are associated with increased rates of cardiovascular and metabolic diseases in Kentucky. Similar to overall health, Kentucky consistently ranks as one of the highest states for prevalence of heart disease, heart attack, stroke, and diabetes *(Figure 25)*. Mortality rates for heart disease, stroke, and diabetes are also higher than national rates, and are particularly concentrated in Eastern Kentucky as well as the far western part of the state *(Figures 26-28)*.

Figure 25. **Prevalence of Select Chronic Diseases, BRFSS 2010**

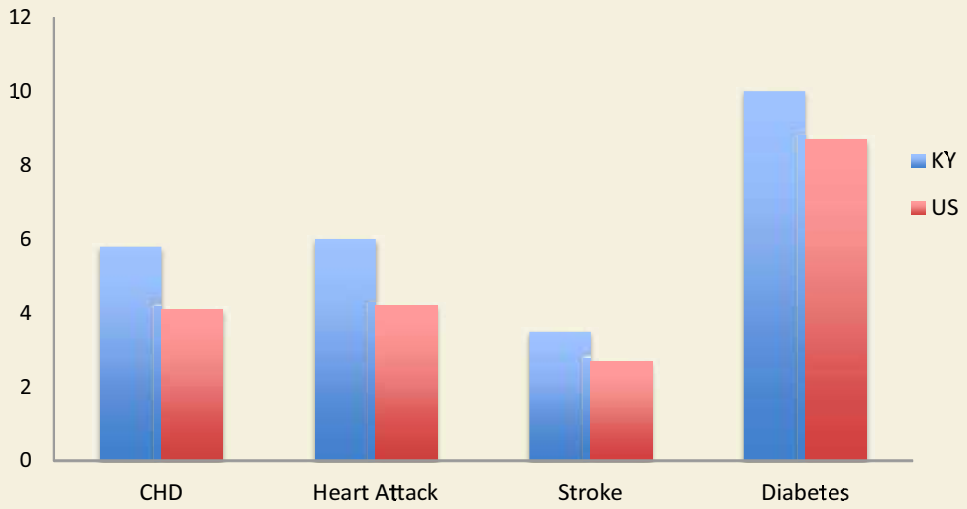


Figure 26. **Coronary Heart Disease Mortality Rate Per 100,000 Residents Adults 35+, CDC WONDER 1999-2007**

Figure 27. **Stroke Mortality Rate Per 100,000 Residents Adults 35+, CDC WONDER 2000-2008**

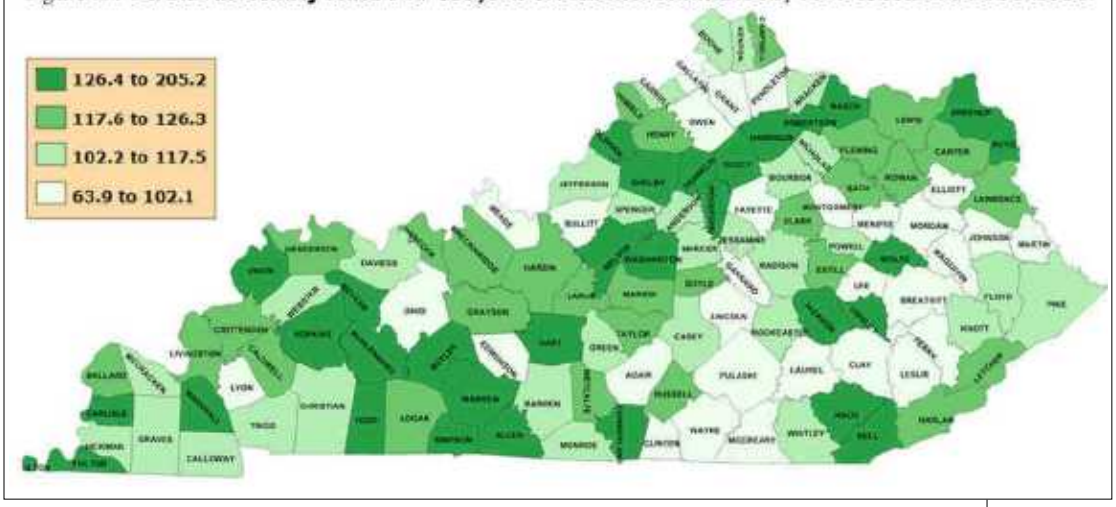


Figure 28. **Diabetes Mortality Rate Per 100,000 Residents Adults 35+, CDC WONDER 1999-2008**

Kentucky's high smoking prevalence also corresponds to increased incidence and mortality of invasive cancer *(Figures 29-30)*, most notably cancers of the lung and bronchus *(Figure 31)*. Compared to the national incidence rate of 459 cases per 100,000 in 2007 for invasive cancer, Kentucky had the third highest rate in the nation at 511 cases per 100,000. For cancers of the lung and bronchus, Kentucky's 2003-2007 mortality rate was 76 cases per 100,000, roughly 43% higher than the national rate of 53 cases per 100,000. Regionally, the highest rates of cancer incidence and mortality tend to be concentrated in Eastern Kentucky.

Increases in opioid and tranquilizer prescription rates have led to considerable morbidity and mortality in Kentucky. In 2008, Kentucky's drug overdose mortality rate (regardless of intent) ranked sixth highest in the US at 17.9 per 100,000 *(Figure 32)*. Drug overdose mortality surpassed suicide mortality in 2005 (15.3 per 100,000 vs. 13.4 per 100,000) and approached motor vehicle rates in 2008 (17.9 per 100,000 vs. 18.5 per 100,000) in Kentucky *(Figure 33)*. Between 1999 and 2009, the prevalence of reporting opiates as the primary substance at treatment admission increased from 1.8% to 23.5% in Kentucky, while the rate only increased from 1.3% to 7.1% nationally *(Figure 34)*.

Figure 29. **Invasive Cancer Incidence Rate Per 100,000 Residents, KCR 2003-2007**

Figure 30. **Invasive Cancer Mortality Rate Per 100,000 Residents, KCR 2003-2007**

Figure 31. **Lung Cancer Mortality Rate Per 100,000 Residents, KCR 2003-2007**

Figure 32. **Drug Overdose Mortality Regardless of Intent, CDC WONDER 2008**

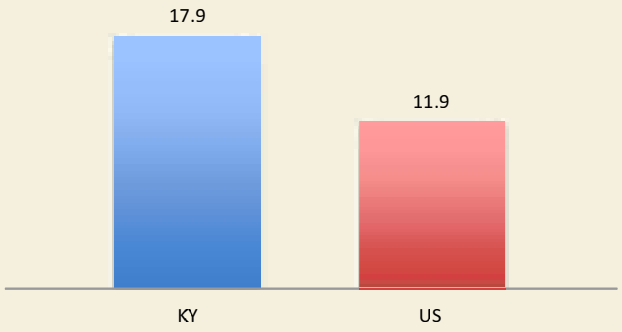


Figure 33. **Causes of Mortality, CDC WONDER 1999-2008**

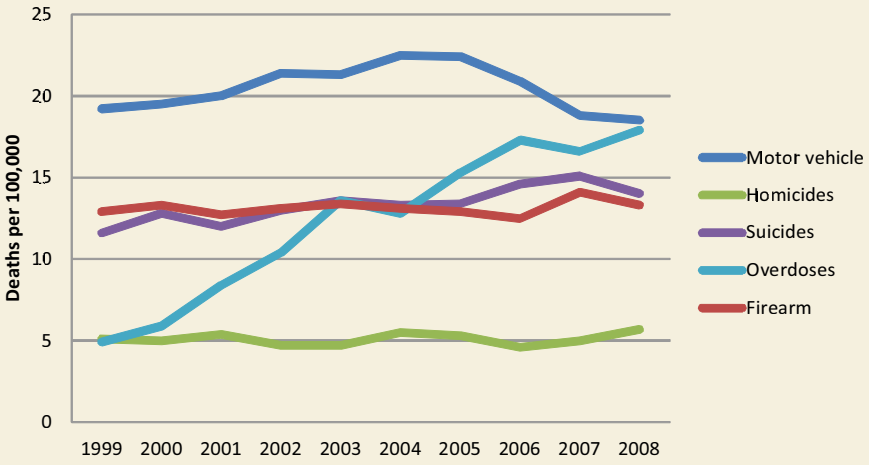
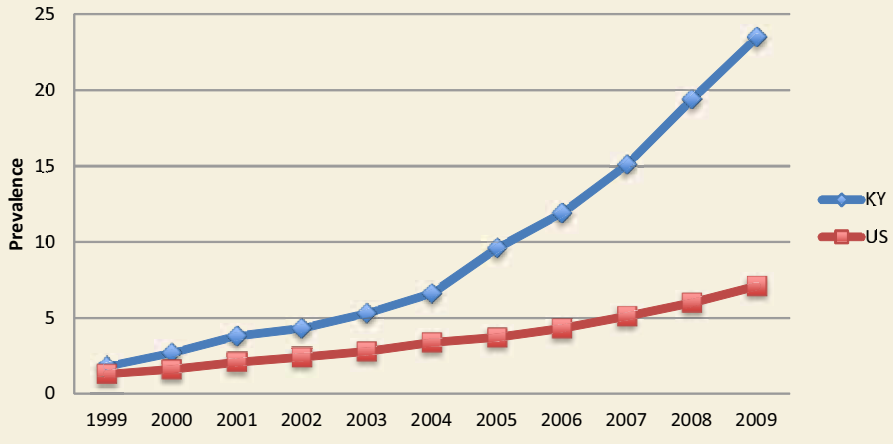


Figure 34. **Opiates as Primary Substance at Admission, TEDS-A 1999-2009**



Fatal Collisions and Arrests

Alcohol and illicit drug use are also associated with impaired driving that can lead to injuries and death. The following maps reflect the rates of collisions and arrests throughout Kentucky's counties: *Figure 35*, Drunk Driving Collisions; *Figure 36*, Fatal Drug Collisions; *Figure 37*, Adult DUI Arrests; *Figure 38*, Juvenile DUI Arrests, and *Figure 39*, Total Drug Arrests.

Figure 35. **Fatal Drunk Driving Collisions, KSP 2009**

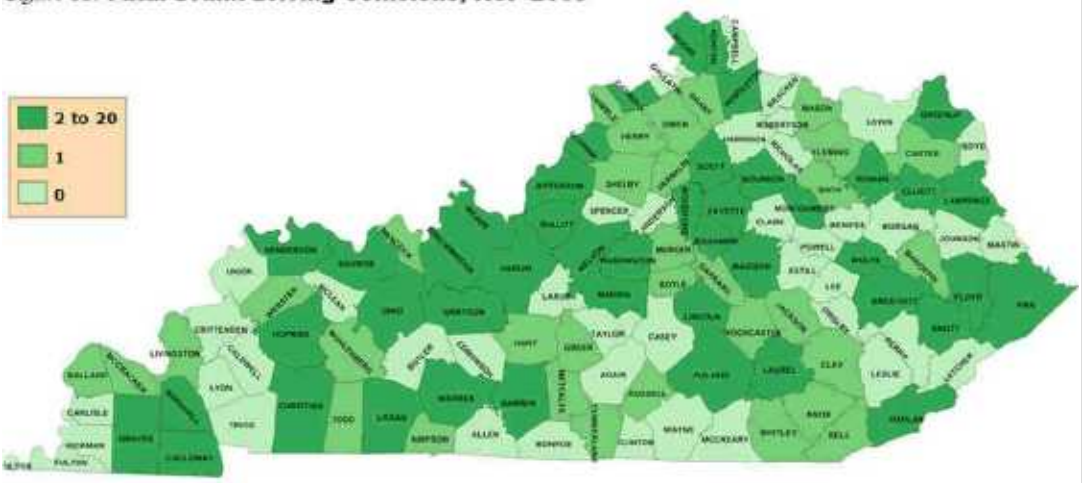


Figure 36. **Fatal Drug Collisions, KSP 2009**

Figure 37. **Adult DUI Arrests, KSP 2009**

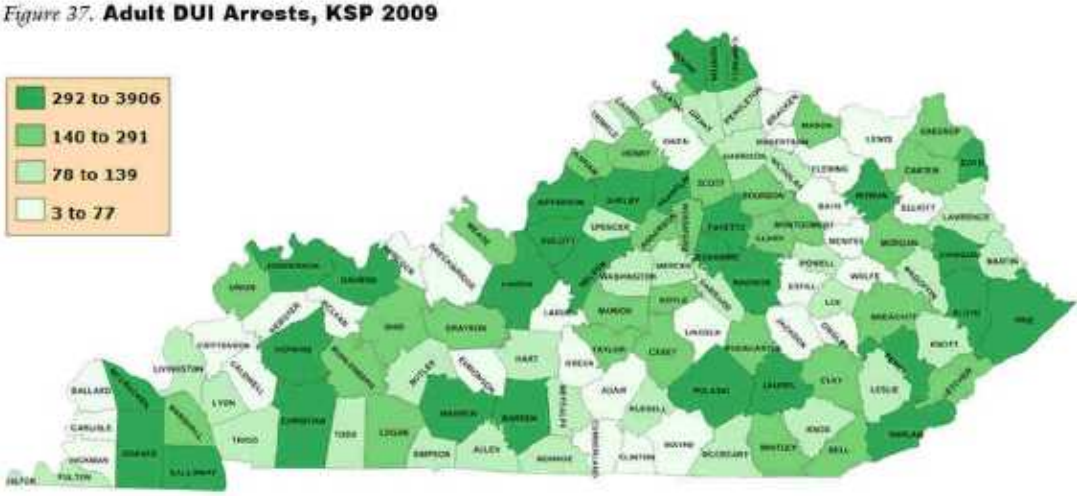


Figure 38. **Juvenile DUI Arrests, KSP 2009**

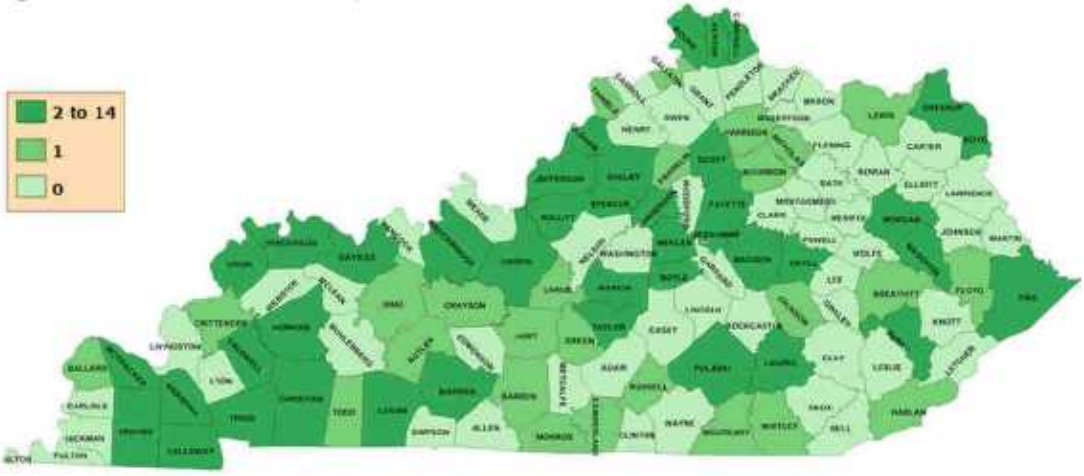


Figure 39. **Total Drug Arrests, KSP 2003-2009**

Pregnancy and Birth Outcomes

Smoking before and during pregnancy is associated with negative consequences such as preterm birth, low birth weight, and developmental delays. Kentucky greatly exceeds the nation in current smokers among women of childbearing age at 34.7% compared to 22.4% nationally (2006). Among pregnant women, the 2006 smoking prevalence rate in Kentucky more than doubles the national rate (26% vs. 10.7%). In 2006, the highest regional rates of smoking during pregnancy were found in Eastern Kentucky *(Figure 40)*. For example, in 2006 the percentage of pregnant women reporting smoking in Menifee County was 59% and 53% in Owsley County. These rates are more than double the rate for the entire state and five times the national rate.

Substance abuse during pregnancy is also associated with poor birth outcomes and developmental issues among children. Data from the Kentucky Department for Community Based Services (DCBS) show that among newborns two weeks or younger, referrals with substance abuse substantiated as a risk factor had risen from 536 cases between January 1, 2008 and December 31, 2008 to 685 cases between November 1, 2009 and October 31, 2010 *(Table 1)*.

Figure 40. **Percent of Live Births to Mothers Smoking During Pregnancy, KIDS COUNT 2006**

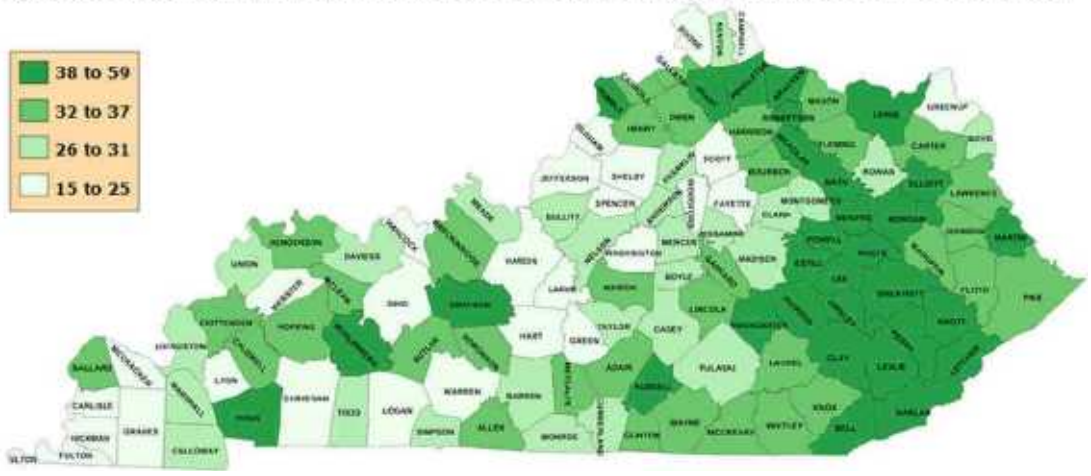


Table 1. **State Rates of Substance Abuse Cited as Risk Factor Among Newborns Two Weeks or Younger**
Kentucky Department for Community Based Services 2009-2010

Region	Cited N	Cited %	Substantiated N	Substantiated %
Totals	*1,142*	—	*685*	—
Jefferson	191	(16)	151	(22)
Eastern Mountains	175	(15)	108	(9)
North Eastern	123	(10)	82	(11)
Northern BG	99	(8)	62	(9)
Southern BG	154	(13)	95	(8)
Salt River Trail	82	(7)	38	(5)
Cumberland	137	(11)	71	(10)
The Lakes	59	(5)	30	(4)
Two Rivers	122	(10)	48	(7)

Education and School System

The Kentucky Center for School Safety (KCSS), in cooperation with the Kentucky Department of Education (KDE), provides annual reports pertaining to demographic and contextual data about disciplinary actions involving public school students who have violated either Board of Education Policies or criminal law. Beginning in 1998, the KDE adopted the FBI Uniform Crime Reporting (UCR) Form as a format to report law violations on school grounds and at school-related activities. Law violations can fall under Part I or Part II, with drug abuse violations falling under Part II.

In Kentucky, 2009-2010 disciplinary actions for drug possession or use increased from 1,897 to 2,002 cases *(Figure 41)*. Marijuana and hashish accounted for over half of all disciplinary actions for possession/use at 53%, a modest increase of two percentage points from 2008-2009. Prescription drug abuse accounted for 15% of all 2009-2010 violations, a small increase of approximately 1% points since 2008-2009. Alcohol violations slightly decreased from 19% in 2008-2009 to 17% in 2009-2010. Regionally, the highest rate of disciplinary actions for drug use and possession in 2009-2010 were in Jefferson County at 6.1 per 1,000 students compared to 3.1 per 1,000 in Kentucky.

Distribution of marijuana/hashish and prescriptions drugs accounted for nearly 75% of all drug distribution disciplinary actions in 2009-2010 *(Figure 42)*. Alcohol distribution also increased 4% points, from 4% in 2008-2009 to 8% in 2009-2010. Like drug use and possession, Jefferson County had the highest rate of disciplinary actions for drug use distribution at 1.1 per 1,000 students compared to 0.6 per 1,000 in Kentucky.

Figure 41. **Disciplinary Actions for Drug Possession and Use, KCSS 2010**

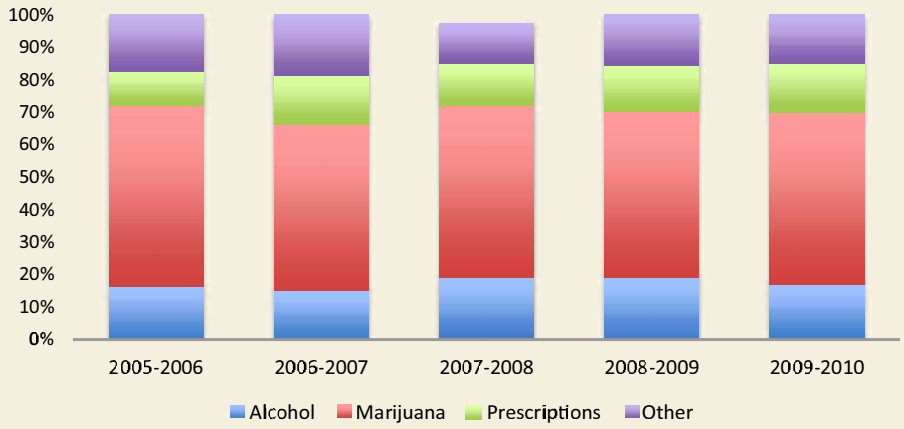
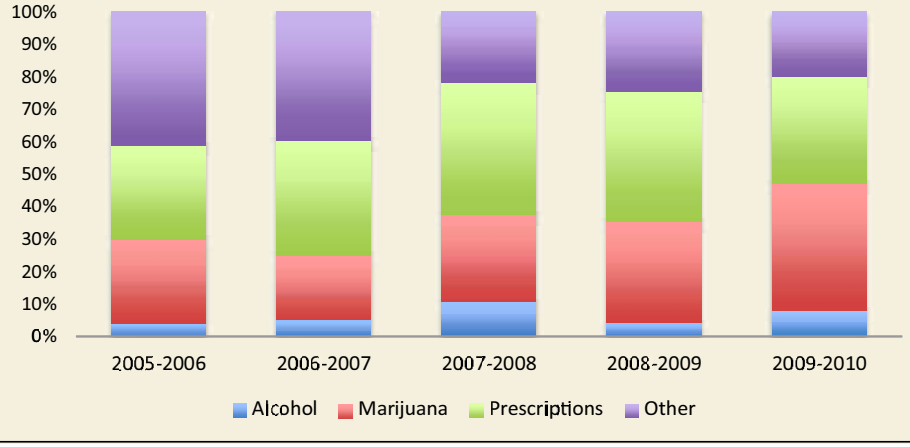


Figure 42. **Disciplinary Actions for Drug Distribution, KCSS 2010**



Risk and Protective Factors

KIP (Kentucky Incentives for Prevention) and NSDUH (National Survey of Drug Use and Health) Findings

Overall, the highest rates of early onset substance use were for alcohol (sip or two) and cigarettes.

The KIP Survey asks multiple questions regarding age of onset, risk perceptions, and accessibility of a variety of substances. Overall, the highest rates of early onset substance use were for alcohol (sip or two) and cigarettes. Although perceiving occasional and regular use of marijuana as high risk decreased in higher grades, the risk perceptions of alcohol and cigarettes remained stagnant. Systematic increases among grades were demonstrated for very easy access to substances.

Table 2. **Age of Onset, Risk Perceptions, and Accessibility of Alcohol, Cigarettes, and Marijuana Among Male and Female Students in Kentucky**
KIP 2010 (N=120,253)

	GRADE 8		GRADE 10		GRADE 12	
FACTORS	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
Age of Onset (≤12 years)						
Alcohol (sip)	6,253	(20.4)	4,699	(15.8)	3,016	(12.1)
Alcohol (regular use)	1,302	(4.3)	1,105	(3.7)	683	(2.7)
Cigarettes	5,422	(17.7)	5,532	(18.3)	4,067	(16.3)
Marijuana	1,516	(4.9)	1,982	(6.6)	1,509	(6.0)
Risk Perception (Strong Risk)						
Alcohol (regular use)	7,626	(24.9)	7,010	(23.6)	6,422	(25.8)
Cigarettes (1+ pack per day)	13,645	(44.5)	13,802	(46.3)	12,091	(48.5)
Marijuana (once or twice)	8,082	(26.4)	5,228	(17.6)	3,530	(14.2)
Marijuana (regular use)	19,444	(63.7)	14,031	(47.3)	9,668	(38.9)
Accessibility (Very Easy)						
Alcohol	4,652	(15.4)	8,880	(29.9)	11,124	(45.3)
Cigarettes	8,016	(26.6)	13,736	(46.8)	17,103	(69.7)
Marijuana	3,302	(11.7)	9,120	(32.9)	10,890	(46.4)
Illicit Drugs†	1,207	(4.0)	2,265	(7.7)	2,320	(9.5)

†Illicit drugs include cocaine, LSD, and amphetamines

The NSDUH also asks questions regarding risk perceptions of cigarette, marijuana, and alcohol use. Among Kentucky respondents 18-25 years old, 26.3% perceived marijuana use once a month to be of great risk in 2007-2008 compared to 24% nationally. For respondents 26+ in 2007-2008, 46% perceived great risk in Kentucky compared to 40.7% nationally. Kentucky and national rates for binge drinking were similar. For those 18-25 years old, 32.7% of Kentucky respondents perceived a great risk similar to 33.2% nationally in 2007-2008. Among 26+ year olds, 43.2% of Kentucky respondents perceived a great risk similar to 43.7% nationally.

The greatest disparities in risk perceptions were for smoking one or more packs of cigarettes per day. Among 18-25 year olds in 2007-2008, 58.9% of Kentucky respondents perceived a great risk compared to 69.8% nationally. Among 26+ year olds, 66% of Kentucky respondents perceived a great risk compared to 75% nationally. Both age groups had the lowest rates nationally.

NSCH (National Survey of Children's Health) and NSCSHCN (National Survey of Children with Special Health Care Needs) Findings

The National Survey of Children's Health (NSCH) is part of the Centers for Disease Control and Prevention's (CDC) State and Local Area Integrated Telephone Survey (SLAITS) and assesses the physical and emotional health of children 0-17 years old every four years through parental/caregiver telephone interviews. The NSCH specifically emphasizes risk and protective factors that influence the well-being of children, including family structure, parental health, and safe neighborhoods.

Data from the 2007 NSCH illustrate several differences in key familial indicators *(Table 3)*. Approximately 22.4% of respondents fell into the 0-99% federal poverty level (FPL) category; this is nearly five percentage points higher than the national rate of 17.8%. Kentucky had fewer families with two biological or adopted parents, and slightly more families with two stepparents and single mothers. Considerably more Kentucky families reported having a family member who smoked cigarettes, pipes, or cigars as well as more family members who smoked inside the house with a child. Rates of parental coping, stress, and anger in Kentucky were similar to the US rates.

Table 3. **Weighted Prevalence of Risk and Protective Factors Among Parents/Caregivers in Kentucky and the United States**
National Survey of Children's Health 2007

	KY (N=1,803)		US (N=91,642)	
FACTORS	**%**	**(95%CI)**	**%**	**(95%CI)**
Poverty Level				
0-99% FPL	22.4	(19.7-25.5)	17.8	(17.1-18.6)
100-199% FPL	22.4	(19.9-25.1)	21.2	(20.5-22.0)
200-399% FPL	33.4	(30.7-36.2)	31.4	(30.6-32.2)
400% FPL+	21.8	(19.8-23.9)	29.5	(28.8-30.3)
Familial Structure				
Two Biological/Adopted Parents	61.6	(58.7-64.4)	67.8	(67.0-68.6)
Two Stepparents	9.3	(7.7-11.1)	7.6	(7.2-8.1)
Single Mother	19.8	(17.4-22.4)	18.7	(18.1-19.3)
Other	9.3	(7.8-11.1)	5.9	(5.5-6.3)
Parental Coping (Poor)	1.6	(0.9-2.8)	2.0	(1.8-2.3)
Parental Stress (Usually/Always)	5.0	(3.8-6.7)	5.1	(4.8-5.6)
Parental Anger (Usually/Always)	2.7	(1.8-4.1)	2.5	(2.3-2.8)
Familial Tobacco Use	39.5	(36.7-42.4)	26.2	(25.5-26.9)
Smoke Inside Home	44.6	(39.8-49.4)	29.0	(27.6-30.3)
Neighborhood Sidewalks	57.1	(54.2-59.9)	73.3	(72.6-74.0)
Neighborhood Parks	66.3	(63.5-68.9)	80.8	(80.2-81.4)
Community Recreation Center	48.5	(45.7-51.4)	65.0	(64.2-65.8)
Community Library	82.0	(79.6-84.2)	86.0	(85.4-86.6)
Dilapidated/Rundown Housing	20.5	(18.1-23.0)	14.6	(14.0-15.2)

Compared to the US, fewer Kentucky respondents reported living in neighborhoods with sidewalks, walking paths, parks and playgrounds, and communities with a recreational center, community center, or boys' and girls' club. Consistent with higher levels of poverty, Kentucky respondents tended to more frequently report being from neighborhoods with poorly kept, dilapidated, or rundown housing than national respondents.

The National Survey of Children with Special Health Care Needs (NSCSHCN) is also part of CDC's SLAITS. Like the NSCH, risk and protective factors are emphasized, but other topics include functional difficulties, transition services, and health care needs in the context of having a child with a special health care need.

The prevalence of children with special health care needs was almost five percentage points higher in Kentucky at 18.5% compared to 13.9% for the US in 2005-2006 *(Table 4)*. Kentucky had increased rates for all demographic categories, with the highest rates seen among the following: those at the 0-99% FPL (25.7%), children 6-11 years old (21.7%), Black (20.3%) and Multiracial (20.0%) children, and males (20.5%).

Among children with special health care needs, 57.4% in Kentucky received regular and continuous early screening for special health care needs compared to 63.8% nationally *(Table 5)*. While Kentucky had less difficulty getting needed referrals than the US, Kentucky had increased rates of school absences (16.5% vs. 14.3%) and time taken to coordinate childcare during the week (14.5% vs. 9.7%).

Table 4. **Prevalence of Children with Special Health Care Needs in Kentucky and the United States by Select Demographics**
National Survey of Children with Special Health Care Needs 2005-2006

	KY	US
DEMOGRAPHICS	**%**	**%**
TOTALS	18.5	13.9
Federal Poverty Level (FPL)		
0-99% FPL	25.7	13.9
100-199% FPL	16.9	14.0
200-399% FPL	16.0	13.6
400% FPL+	16.5	14.0
Age		
0-5 years	13.0	8.8
6-11 years	21.7	16.0
12-17 years	20.8	16.8
Race/Ethnicity		
Non-Hispanic White	18.3	15.5
Non-Hispanic Black	20.3	15.0
Hispanic	12.2	8.3
Multiracial	20.0	17.9
Sex		
Male	20.5	16.1
Female	16.4	11.6

Table 5. **Needs of Children with Special Health Care Needs in Kentucky and the United States**
National Survey of Children with Special Health Care Needs, 2005-2006

	KY	US
HEALTH CARE NEED	**%**	**%**
Regular Early Screening	57.4	63.8
Difficulty Getting Needed Referral	15.9	21.1
11+ School Absences	16.5	14.3
11+ Hours/wk. Coordinating Care	14.5	9.7

Nationally in 2008-2009, 4.6% of adults aged 18 and older had a serious mental illness in the past year compared to 5.4% in Kentucky.

Mental and Behavioral Health

NSCH (National Survey of Children's Health) Findings

For respondents with children 2-17 years old, the NSCH asks a series of questions about whether a doctor or another health care provider has ever told them that their child has attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD), depression, anxiety problems, or behavioral/conduct problems like Oppositional Defiant Disorder or Conduct Disorder *(Figure 43 and Table 6)*.

Figure 43. **Lifetime Prevalence of Mental Disorders, NSCH 2007**

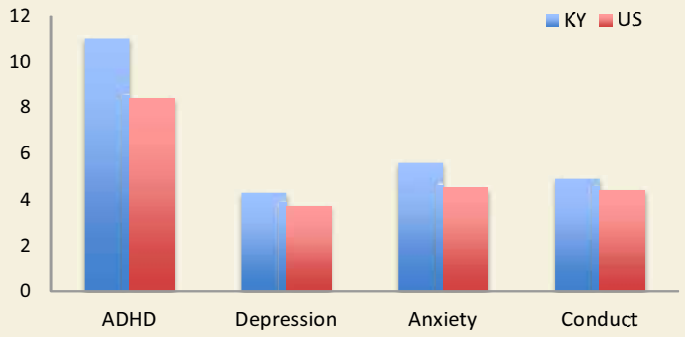


Table 6. **Weighted Prevalence of Lifetime Mental and Behavioral Disorders by Demographics in Kentucky**
National Survey of Children's Health 2007 (N=1,620)

	ADD/ADHD		DEPRESSION		ANXIETY		CONDUCT	
DEMOGRAPHICS	**%**	**(95%CI)**	**%**	**(95%CI)**	**%**	**(95%CI)**	**%**	**(95%CI)**
Sex								
Male	13.6	(11.2-16.5)	4.9	(3.3-7.2)	6.1	(4.4-8.4)	6.2	(4.5-8.6)
Female	8.3	(5.9-11.5)	3.6	(2.3-5.7)	5.1	(3.3-7.9)	3.6	(2.2-5.8)
Age								
2-5 years	—	—	0.5	(0.1-3.2)	2.0	(0.5-7.5)	1.7	(0.7-4.2)
6-11 years	11.6	(8.8-16.1)	2.5	(1.4-4.6)	4.9	(3.3-7.3)	4.8	(3.0-7.5)
12-17 years	17.6	(14.1-21.6)	8.5	(6.0-11.7)	8.6	(6.2-12.0)	7.2	(5.0-10.2)
Race/Ethnicity								
White	10.8	(9.0-12.9)	4.2	(3.1-5.8)	5.9	(4.4-7.8)	4.7	(3.4-6.4)
Black	13.2	(6.4-25.5)	2.5	(0.8-8.0)	1.8	(0.4-6.8)	5.9	(2.2-14.5)
Other	14.8	(9.4-13.3)	8.7	(3.5-19.7)	7.3	(3.0-16.6)	7.1	(3.3-14.5)
Federal Poverty Level								
0-99% FPL	14.0	(9.0-20.9)	8.3	(4.7-14.1)	9.5	(5.3-16.6)	9.0	(5.3-14.9)
100-199%	12.5	(8.5-17.9)	4.4	(2.5-7.6)	5.8	(3.7-9.1)	5.0	(3.0-8.1)
200-399%	9.1	(6.8-12.2)	3.2	(1.8-5.4)	4.5	(2.8-7.0)	4.3	(2.6-7.0)
400% FPL+	9.8	(7.1-13.3)	2.5	(1.2-5.0)	3.4	(1.9-6.0)	1.3	(0.6-2.9)

NSDUH (National Survey on Drug Use and Health) Findings

Several changes were made to the adult mental health items in the 2008 NSDUH to accommodate a need for estimates of serious mental illness and any past-year major depressive episode. These changes caused incomparable trends for major depressive episode and serious psychological distress among respondents 18 and older. Consequently, state and regional estimates of adult depression and serious psychological distress have been discontinued for the 2012 Kentucky State Profile.

Adults (18+ years old) are defined as having serious mental illness (SMI) if they currently or at any time in the past year had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet diagnostic criteria specific to the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), and that has resulted in serious functional impairment that substantially interferes with or limits one or more major life activities. Past-year major depressive episode (MDE) is also determined from the criteria specific for major depression in the DSM-IV.

Nationally in 2008-2009, 4.6% of adults aged 18 and older had a serious mental illness in the past year compared to 5.4% in Kentucky *(Figure 44)*. National (7.4%) and state (7.5%) rates were virtually identical among those 18-25 years old, while the 2008-2009 rate of SMI was higher in Kentucky (5.1%) than the US (4.1%) for adults 26+ years old. For past-year MDE *(Figure 45)*, Kentucky rates were only higher than the US for adults 26 and older: 7% vs. 6.2%.

Figure 44. **Past-Year Serious Mental Illness (SMI) Among Kentucky Adults, NSDUH 2008-2009**

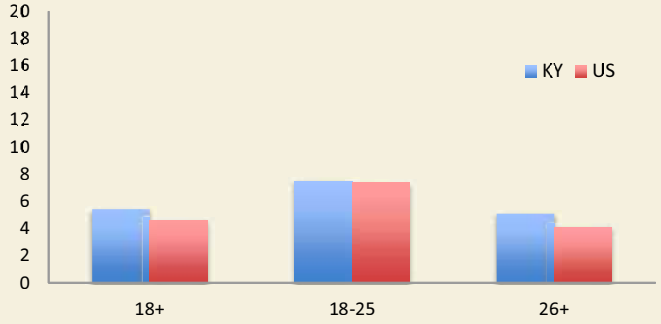
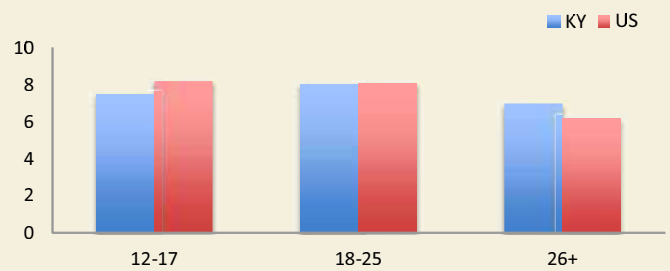


Figure 45. **Past-Year Major Depressive Episode (MDE), NSDUH 2008-2009**



BRFSS (Behavioral Risk Factor Surveillance System) Findings

Under the Healthy Day Measures, the BRFSS asks respondents how many days during the past 30 days was their mental health (i.e., stress, depression, and emotional problems) not good. From 2003-2009, the average number of poor mental health days in Kentucky was 4.3 days compared to 3.5 days nationally. Counties with the highest number of poor mental health days tended to be concentrated throughout Eastern Kentucky as well as several counties in the north and west.

Also included in the Healthy Day Measures is a question that asks respondents to self-rate their general health as excellent, good, fair, or poor. From 2003-2009, the prevalence of self-rated poor or fair health in Kentucky was 22% compared to 10% for the national benchmark. Like mentally unhealthy days, poor or fair health tends to cluster throughout Eastern Kentucky, with rates ranging from 29-45%.

Figure 46. **Average Poor Mental Health Days, BRFSS 2003-2009**

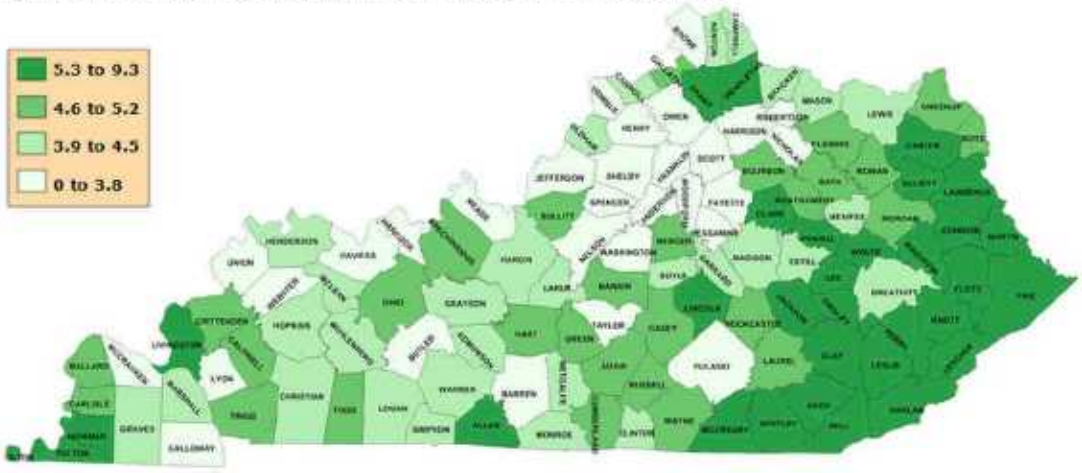


Figure 47. **Poor or Fair Health, BRFSS 2003-2009**

Suicide

Along with the additions of Serious Mental Illness (SMI) and Major Depressive Episode (MDE) in the 2008 NSDUH, a set of questions was added to measure the prevalence of suicidal thoughts and behavior in the past year among adults 18 and older. In 2008-2009, 3.7% of adults 18 and older had serious thoughts of suicide in the US compared to 3.9% in Kentucky *(Figure 48)*. Among adults 18-25 and 26+ years old, the past-year prevalence rates in Kentucky and the US were also similar.

For adolescents, the YRBS asks high school students a series of questions about seriously considering suicide, making a suicide plan, and how many times they have attempted suicide in the past 12 months *(Figure 49)*.

Figure 48. **Past-Year Suicidal Thoughts, NSDUH 2008-2009**

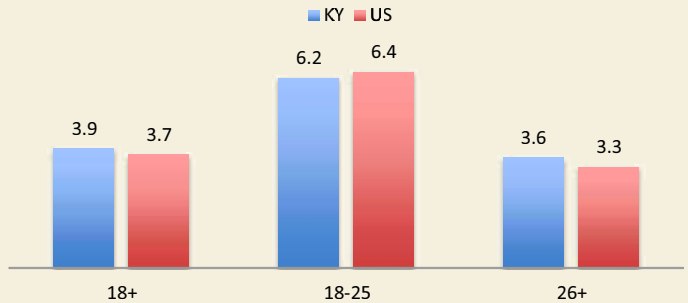
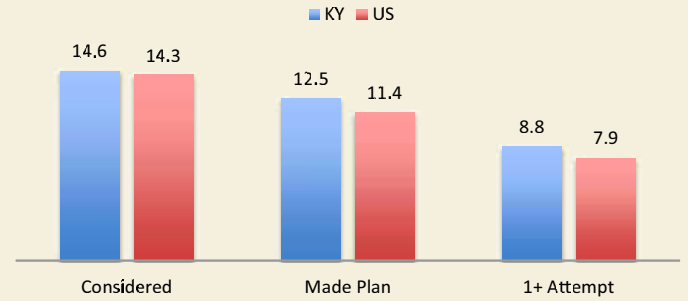


Figure 49. **Past-Year Suicidal Behaviors, YRBS 2009**



In 2009, rates for all suicide indicators were higher in Kentucky then the US. For Kentucky, females had higher rates of suicide attempts and tended to be younger. For both males and females, Hispanics and Other races/ethnicities had higher rates of attempted suicide compared to Whites. Attempted suicide was heavily clustered among several risk factors and significantly elevated compared to state averages *(Table 7)*.

The suicide mortality rate from 1999-2007 was 13.3 per 100,000 in Kentucky compared to 10.8 per 100,000 nationally. In Kentucky, the highest rates of suicide mortality tended to be concentrated throughout Western and Central regions *(Figure 50)*.

Table 7. **Weighted Prevalence of Past-Year Suicide Attempts among Select Demographics and Risk Factors in Kentucky**
Youth Risk Behavior Surveillance System 2005-2009 (N=8,654)

	MALES		FEMALES		TOTALS	
FACTORS	**%**	**(95%CI)**	**%**	**(95%CI)**	**%**	**(95%CI)**
12-Month Suicide Attempt	7.1	(6.0-8.4)	9.8	(8.4-11.4)	8.5	(7.5-9.6)
Grade						
9th	6.1	(4.0-9.1)	13.2	(10.4-16.6)	9.6	(7.8-11.7)
10th	6.8	(4.8-9.4)	10.5	(8.2-13.4)	8.7	(6.9-10.8)
11th	8.0	(5.8-11.0)	8.4	(6.2-11.1)	8.2	(6.4-10.4)
12th	7.8	(5.9-10.3)	6.1	(4.7-7.9)	6.9	(5.6-8.4)
Race/Ethnicity						
White	6.5	(5.3-7.9)	9.7	(8.2-11.4)	8.1	(7.0-9.2)
Black	9.5	(6.1-14.4)	8.9	(6.0-13.0)	9.3	(6.7-12.4)
Hispanic	20.8	(15.4-27.6)	16.6	(10.4-25.5)	19.2	(13.7-25.1)
Other	10.6	(6.0-18.1)	16.0	(10.6-23.5)	13.6	(9.8-17.6)
Risk Factors						
Past-month Substance Use †	8.8	(7.2-10.6)	15.6	(12.9-18.6)	12.2	(10.5-13.9)
Dating abuse	14.9	(11.8-18.5)	20.1	(15.5-25.7)	17.4	(14.3-21.0)
Sexual assault	23.2	(17.1-30.6)	29.1	(23.2-35.7)	27.2	(22.9-31.8)
Fighting	11.7	(9.6-14.1)	22.7	(18.7-27.2)	16.0	(13.9-18.4)
Sadness	18.0	(15.0-21.5)	21.3	(18.3-24.6)	20.0	(17.5-22.7)
Weight loss – Fast	19.1	(13.7-26.1)	22.6	(18.9-26.9)	21.5	(18.3-25.1)
Weight loss – Vomit	27.6	(20.9-35.4)	31.0	(24.5-38.4)	29.8	(25.0-35.1)
Weight loss – Pill	16.6	(12.4-21.7)	22.8	(17.5-29.2)	20.1	(16.8-23.9)

†Past-month use of cigarettes, alcohol, marijuana, or cocaine 1+ days

Figure 50. **Suicide Mortality Rate Per 100,000 Residents, CDC WONDER 1999-2007**

Health Care Access and Utilization

Outside of Jefferson County (59 per 100,000) and Fayette County (80 per 100,000), the vast majority of Kentucky counties have limited access to mental health providers *(Figure 51)*. Conversely, primary care providers tend to be more widely available, although several counties throughout the state also have minimal access *(Figure 52)*.

Figure 51. **Mental Health Provider Rate Per 100,000 Residents, ARF 2008**

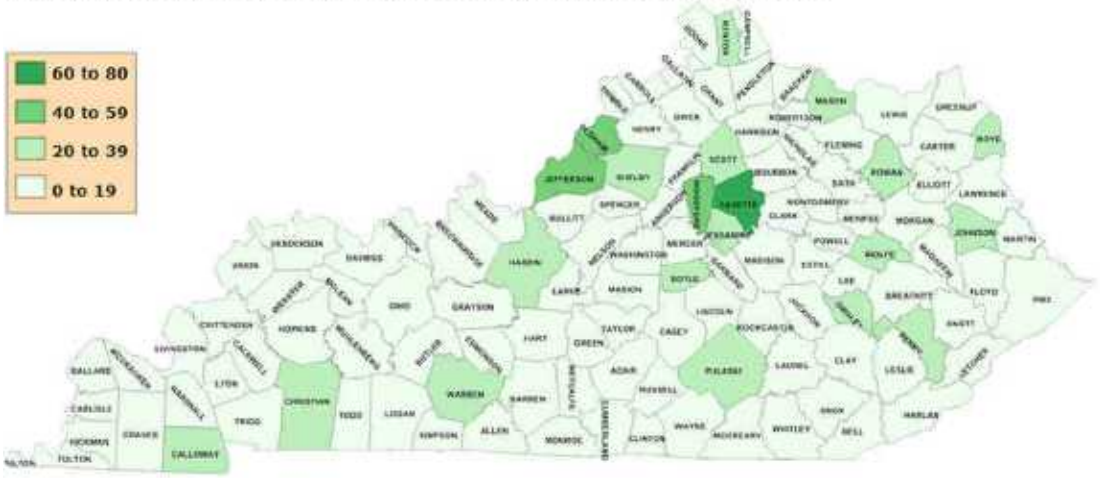
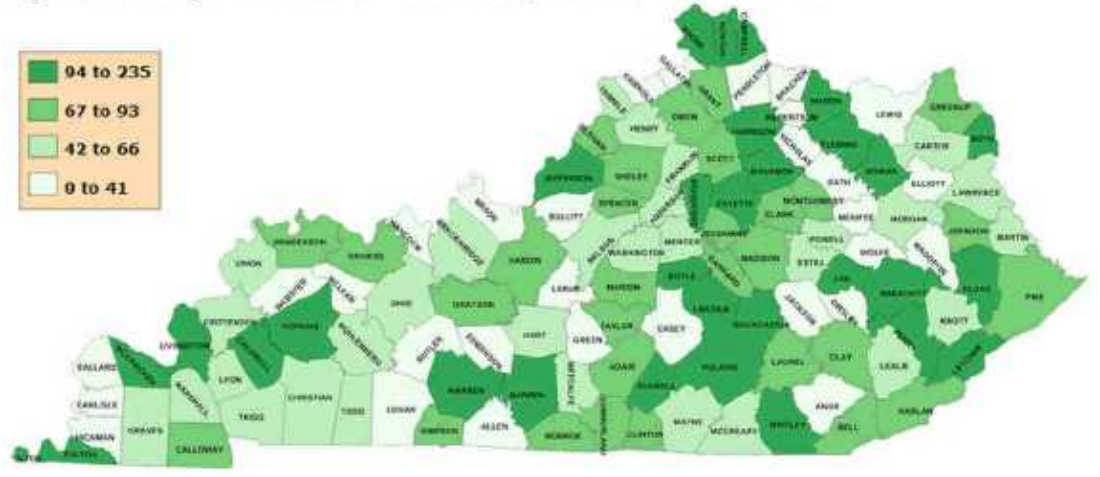


Figure 52. **Primary Care Provider Rate Per 100,000 Residents, ARF 2009**



Appendices

Appendix 1. Gallup-Healthways Sub-Indices

The Gallup-Healthways Well-Being Index Composite Score is based of six sub-indices: Life Evaluation, Emotional Health, Physical Health, Health Behavior, Work Environment, and Basic Access. The Life Evaluation Sub-Index is partly based on the Cantril Self-Anchoring Striving Scale and combines the evaluation of one's present life situation with one's anticipated life situation in five years. The Emotional Health Sub-Index is a composite of respondents' daily experience, asking respondents to think about how they felt the previous day along nine dimensions. The Physical Health Sub-Index is comprised of questions related to body mass index, disease burden, sick days, physical pain, daily energy, history of disease, and daily health experiences. The Healthy Behavior Sub-Index addresses life style habits related to health outcomes. The Work Environment Sub-Index surveys workers on factors related to their feelings and perceptions about their work environment. The Basic Access Sub-Index is based on 13 items measuring access to food, shelter, healthcare and a safe and satisfying place to live.

Appendix 2. **State Congressional District Definitions**

District 1	District 2	District 3	District 4	District 5	District 6
Adair	Barren	Jefferson	Boone	Rowan	Franklin
Allen	Breckinridge		Kenton	Bath	Scott
Ballard	Bullitt		Campbell	Menifee	Anderson
Butler	Daviess		Oldham	Morgan	Woodford
Caldwell	Edmonson		Trimble	Johnson	Mercer
Calloway	Grayson		Carroll	Martin	Boyle
Carlisle	Green		Gallatin	Lawrence	Lincoln
Casey	Hancock		Henry	Magoffin	Garrard
Christian	Hardin		Owen	Wolfe	Jessamine
Clinton	Hart		Grant	Lee	Madison
Crittenden	Jefferson		Pendleton	Breathitt	Estill
Cumberland	Larue		Bracken	Floyd	Powell
Fulton	Marion		Scott	Pike	Clark
Graves	Meade		Harrison	Knott	Fayette
Henderson	Nelson		Robertson	Perry	Bourbon
Hickman	Ohio		Mason	Letcher	Montgomery
Hopkins	Spencer		Nicholas	Leslie	
Livingston	Shelby		Fleming	Clay	
Logan	Taylor		Bath	Laurel	
Lyon	Warren		Lewis	Pulaski	
Marshall	Washington		Greenup	Rockcastle	
McCracken			Boyd	Jackson	
McLean			Carter	Wayne	
Metcalfe			Elliott	McCreary	
Monroe				Whitley	
Muhlenberg				Bell	
Russell				Knox	
Simpson				Harlan	
Todd					
Trigg					
Ohio					
Union					
Lincoln					
Webster					

Appendix 3. ***Data Sources***

AREA RESOURCE FILE (ARF)

Description: The ARF contains more than 6,000 variables for each of the nation's counties. ARF contains information on health facilities, health professions, measures of resource scarcity, health status, economic activity, health training programs, and socioeconomic and environmental characteristics.
Sponsor(s): Health Resources and Services Administration (HRSA)
Geographic level: National, State, County
Frequency: Data collected and reported annually
Years Used: 2008, 2009
Indicators: Mental health and primary care provider rate per 100,000 residents.
Strengths: Standardized and comparable across states; County-level estimates
Weaknesses: Most recent years unavailable Limited data access
Link: http://arf.hrsa.gov/

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

Description: The BRFSS is a state-based system of telephone surveys that measure data pertaining to health risk behaviors, clinical preventive practices, and health care access and use primarily related to chronic diseases and injury. States use standard procedures to collect data from adults 18 years or older.
Sponsor(s): Centers for Disease Control and Prevention (CDC)
Geographic level: National, State, County
Frequency: Data collected and reported monthly
Years Used: 2003-2009
Indicators: Poor mental health days, poor or fair health.
Strengths: Standardized and comparable across states; County-level estimates;Wide range of health indicators and outcomes
Weaknesses: Cross-sectional data; Unreliable county-level estimates; Variations in indicators and outcomes across national surveys
Link: http://www.cdc.gov/BRFSS/

CDC WIDE-RANGING ONLINE DATA FOR EPIDEMIOLOGIC RESEARCH (CDC WONDER)

Description: The CDC WONDER contains population, morbidity, and mortality data for all US counties from 1979 to 2007. Frequencies and rates of death may be obtained for underlying cause of death, state, county, age, race, sex, and year. The International Classification of Diseases 9th Revision (ICD 9) codes are used for underlying causes of death from 1979 to 1998. In 1999, the ICD 10 was adopted to specify cause of death.
Sponsor(s): Centers for Disease Control and Prevention (CDC)
Geographic level: National, State, County
Frequency: Data collected and reported annually
Years Used: 1999-2007
Indicators: Coronary heart disease mortality (ICD-10 codes: I20-I25), stroke mortality (I60-I69), diabetes mortality (E10-E14), drug overdose mortality (injury mechanism: poisoning), and suicide mortality (injury intent: suicide).
Strengths: Standardized and comparable across states; County-level estimates; Trends available from 1979.
Weaknesses: Limited racial categories; Unreliable county-level estimates; Variations in ICD codes
Link: http://wonder.cdc.gov/

DARTMOUTH ATLAS OF HEALTH CARE (DAHC)

Description: The DAHC documents variations in how medical resources are distributed and utilized throughout the US using Medicare data. Small area analysis is used to focus on a defined geographic area or a population that uses a specific hospital.
Sponsor(s): Center for Medicare and Medicaid Services (CMS)
Geographic level: National, State, County
Frequency: Data collected and reported annually
Years Used: 2006-2007
Indicators: Preventable hospital visits
Strengths: Standardized and comparable across states; County-level estimates
Weaknesses: Limited to adults 65 and older; Unreliable county-level estimates; Most recent years unavailable
Link: http://www.dartmouthatlas.org/

GALLUP-HEALTHWAYS WELL-BEING INDEX

Description: The Gallup-Healthways Well-Being Index interviews at least 1,000 U.S. adults every day and provides real-time measurement and insights needed to improve health, increase productivity, and lower healthcare costs. Public and private sector leaders use data on life evaluation, physical health, emotional health, healthy behavior, work environment, and basic access to develop and prioritize strategies to help their communities thrive and grow.
Sponsor(s): Gallup Healthways
Geographic level: State, County
Frequency: Data collected and reported daily
Years Used: 2010
Indicators: Life evaluation, physical health, emotional health, healthy behavior, work environment, and basic access
Strengths: Fast reporting; Regional estimates; Standardized across states
Weaknesses: No county-level estimates; Telephone interviewing
Link: http://www.well-beingindex.com/

KENTUCKY ALL SCHEDULE PRESCRIPTION REPORTING SYSTEM (KASPER)

Description: KASPER tracks controlled substances dispensed in the Commonwealth of Kentucky. Data are primarily intended for physicians, pharmacists, and law enforcement officials.
Sponsor(s): Kentucky Cabinet for Health and Family Services (CHFS)
Geographic level: State, County
Frequency: Data collected and reported quarterly
Years Used: 2011

Indicators: Prescription rates for oxycodone, hydrocodone, alprazolam, and diazepam
Strengths: Fast reporting; County-level estimates
Weaknesses: Limited data access; No data on diverted prescriptions; Unstandardized across states
Link: http://chfs.ky.gov/os/oig/kasper.htm

KENTUCKY CANCER REGISTRY (KCR)

Description: KCR began as a voluntary reporting system in 1986. In 1990, the State General Assembly passed legislation establishing KCR as the centralized population-based cancer registry for the Commonwealth of Kentucky. Mandatory reporting to KCR began in 1991. All Kentucky hospitals and associated outpatient facilities are required to report cancer cases to the Cancer Patient Data Management System developed by KCR
Sponsor(s): National Cancer Institute (NCI) and Centers for Disease Control and Prevention (CDC)
Geographic level: State, County
Frequency: Data collected and reported annually
Years Used: 2003-2007
Indicators: Invasive cancer mortality (ICD-10 codes: C00-D49), lung and bronchus cancer mortality (C34)
Strengths: Rigorous data quality control and assurance; Large annual state samples; County-level estimates
Weaknesses: Unreliable county-level estimates; Most recent years unavailable; Variations in rates across data sources
Link: http://www.kcr.uky.edu/

KENTUCKY CENTER FOR SCHOOL SAFETY (KCSS)

Description: The KCSS brings together a collaborative partnership to facilitate training and technical assistance to education, human service and justice professionals, teacher preparation, applied research, electronic communication, and school and community needs assessment.
Sponsor(s): Kentucky Department of Education Eastern Kentucky University
Geographic level: State, County
Frequency: Data collected and reported biennially
Years Used: 2010
Indicators: Disciplinary actions for drug possession, use, and distribution
Strengths: County-level estimates
Weaknesses: Inconsistent drug and substance definitions
Link: http://www.kysafeschools.org

KENTUCKY DEPARTMENT FOR COMMUNITY BASED SERVICES (DCBS)

Description: DCBS was formed within the Cabinet for Families and Children in 1998 to give local offices more decision-making authority and the ability to collaborate more effectively with other community service providers. DCBS services are administered through our network of nine service regions and offices in each of Kentucky's 120 counties. In addition, DCBS utilizes a network of contract officials to deliver services, such as child care. The provision of services is enhanced through a close relationship and coordination with local community partners.
Sponsor(s): Kentucky Cabinet for Health and Family Services
Geographic level: State, County
Frequency: Data collected and reported annually
Years Used: 2010
Indicators: Substance abuse cited and substantiated as risk factor among newborns
Strengths: County-level estimates
Weaknesses: Estimates based on small samples
Link: http://chfs.ky.gov/dcbs/

KENTUCKY INCENTIVES FOR PREVENTION (KIP)

Description: The KIP Survey is administered to students in grades six, eight, 10, and 12 to provide data to school districts regarding use of alcohol, tobacco, and other drugs. Data regarding risk perceptions, age of onset, accessibility, school safety, and gambling are also measured.
Sponsor(s): Kentucky Division of Behavioral Health, Kentucky Office of Drug Control Policy (ODCP), and Center for Substance Abuse Prevention (CSAP) at the Substance Abuse and Mental Health Services Administration (SAMHSA)
Geographic level: State, County
Frequency: Data collected and reported biennially
Years Used: 2010
Indicators: Current alcohol, tobacco, and drug use; age of onset, risk perceptions, and accessibility of substance use
Strengths: Rigorous data quality control and assurance; Large samples; County-level estimates; Voluntary participation
Weaknesses: Variations in county rates across years; Non-probability sampling
Link: http://www.reachoflouisville.com/kip/index.htm

KENTUCKY OFFICE OF VITAL STATISTICS

Description: Kentucky's Vital Statistics Law, enacted by the General Assembly in 1910, provides for and legalizes the registration of births and deaths.
Sponsor(s): Kentucky Cabinet for Health and Family Services
Geographic level: State, County
Frequency: Data collected and reported annually
Years Used: 2006
Indicators: Births to mothers who smoked during pregnancy
Strengths: County-level estimates
Weaknesses: Small samples; Data not comparable to years prior to 2004
Link: http://chfs.ky.gov/dph/vital/

KENTUCKY STATE POLICE (KSP)

Description: The KSP archives data regarding alcohol and drug-related collisions, adult and juvenile arrests, and other illegal activity
Sponsor(s): Commonwealth of Kentucky
Geographic level: State, County
Frequency: Data collected and reported annually
Years Used: 2009
Indicators: Fatal collisions; Alcohol and drug arrests
Strengths: County-level estimates
Weaknesses: Small samples
Link: http://www.kentuckystatepolice.org

MONITORING THE FUTURE (MTF)

Description: MTF is a national survey involving interviews with approximately 50,000 8th, 10th, and 12th grade students. Annual follow-up questionnaires are mailed to a sample of each graduating class for a number of years after initial participation.
Sponsor(s): National Institute on Drug Abuse (NIDA)
Geographic level: National
Frequency: Data collected and reported annually
Years Used: 2010
Indicators: Current alcohol, tobacco and drug use
Strengths: Rigorous data quality control and assurance; Large sample; Follow-ups incorporated in study design
Weaknesses: No state or county-level data
Link: http://monitoringthefuture.org/

NATIONAL SURVEY OF CHILDREN'S HEALTH (NSCH)

Description: The NSCH examines the physical and emotional health of children age 0-17 through telephone interviews with primary caregivers. Special emphasis is placed on well-being, family interactions, parental health, school experiences, and neighborhood characteristics.
Sponsor(s): Maternal and Child Health Bureau of the Health Resources and Services Administration (HSRA)
Geographic level: National, State
Frequency: Data collected and reported every four years
Years Used: 2007
Indicators: Poverty, familial structure, community characteristics, familial tobacco use, attention deficit disorders, depression, anxiety, and conduct disorder
Strengths: Rigorous data quality control and assurance; State-level estimates; Easy to use, interactive data query tool
Weaknesses: Standardized and comparable across states; No county-level estimates; Most recent years unavailable
Link: http://www.nschdata.org/Content/Default.aspx

NATIONAL SURVEY OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS (NSCSHCN)

Description: The NSCSHCN examines the extent to which children with special health care needs have access to medical homes and needed services, adequate health insurance, adequate care coordination, parental coping and satisfaction, and functional difficulties.
Sponsor(s): Maternal and Child Health Bureau of the Health Resources and Services Administration (HSRA)
Geographic level: National, State
Frequency: Data collected and reported every four years
Years Used: 2006
Indicators: Children with special health care needs by poverty level, age, sex and race, health care needs
Strengths: Rigorous data quality control and assurance; State-level estimates; Easy to use, interactive data query tool
Weaknesses: Standardized and comparable across states; No county-level estimates; Most recent years unavailable
Link: http://www.nschdata.org/Content/Default.aspx

NATIONAL SURVEY ON DRUG USE AND HEALTH (NSDUH)

Description: The NSDUH is a national survey involving in-home interviews with approximately 70,000 randomly selected individuals age 12 and older.
Sponsor(s): Substance Abuse and Mental Health Services Administration (SAMHSA)
Geographic level: National, State, County
Frequency: Data collected annually and reported biennially
Years Used: 2004-2006, 2006-2008
Indicators: Current alcohol, tobacco and drug use, risk perceptions, serious psychological distress, major depressive episode
Strengths: Regional estimates; Standardized and comparable across states; Clinically significant estimates
Weaknesses: Limited state-level indicators; Most recent years unavailable
Link: https://nsduhweb.rti.org/

TREATMENT EPISODE DATA SET-ADMISSIONS (TEDS-A)

Description: TEDS-A is an administrative data system providing descriptive information about the flow of admissions to providers of substance abuse treatment. It includes annual data on the number and characteristics of individuals admitted to public and private substance abuse treatment programs receiving public funding.
Sponsor(s): Substance Abuse and Mental Health Services Administration (SAMHSA)
Geographic level: State and Core-Based Statistical Area (CBSA)
Frequency: Data collected and reported annually
Years Used: 1999-2009
Indicators: Primary substance reported at admission
Strengths: CBSA estimates; Standardized across states
Weaknesses: No county-level estimates
Replicate cases
Link: http://wwwdasis.samhsa.gov/webt/information.htm

UNITED STATES CENSUS BUREAU

Description: The Census Bureau develops population estimates with a component of population change using administrative records to estimate the household and group population.
Sponsor(s): US Census Bureau
Geographic level: National, State, County
Frequency: Data collected and reported annually
Years Used: 2009
Indicators: Total population, gender, race and ethnicity, poverty, median household income
Strengths: Data include citizens, non-citizen legal residents, non-citizen long-term visitors, and illegal immigrants
Weaknesses: Most recent years unavailable
Link: http://www.census.gov/

YOUTH RISK BEHAVIOR SURVEY (YRBS)

Description: The YRBS is a national school-based survey that monitors six types of health-risk behaviors that influence the leading causes of morbidity and mortality among students grades 9-12.
Sponsor(s): Centers for Disease Control and Prevention (CDC)
Geographic level: National, State
Frequency: Data collected and reported biennially
Years Used: 2005, 2007, 2009
Indicators: Current alcohol, tobacco and drug use, suicidal behavior by grade, race, and risk factors
Strengths: Standardized and comparable across states; State-level estimates; Rigorous data quality control and assurance
Weaknesses: No county-level estimates; Cross-sectional data
Link: http://www.cdc.gov/HealthyYouth/yrbs/index.htm

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Resources for Education, Adaptation, Change and Health

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